ABSTRACT OF

The Gulstonian Lectures

ON

SECONDARY DEGENERATIONS OF THE SPINAL CORD.

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LECTURE I.

AFTER a brief preliminary reference to the terms of the bequest and the development of our knowledge of the central nervous system, the lecturer proceeded to a short summary of the features of Wallerian degeneration in cut nerves, pointing out the primary loss of transparency which occurs with the cleavage of the myeline, and which is marked by a diminution of irritability of the nerve to all stimuli. Under the microscope the white substance is seen to split into short cylinders, later on completely liquefying and appearing as droplets within the sheath. At the same time the nerve corpuscles increase in size and number, and the axis cylinder undergoes changes *pari passu*. Ultimately the degenerated materials of the white substance and axis cylinder mingle and gradually become absorbed, leaving only the primitive sheath with its proliferated nuclei. Regeneration occurs by the appearance of primitive fibrils in the old sheaths; at first small, they gradually enlarge and acquire a myeline investment. The fibres in the cord differ from those of peripheral nerves in possessing no definite primitive sheath or nerve corpuscles, the place of these structures being taken by the neuroglia. The causes of secondary degeneration are (1) destruction of trophic centres in the brain or medulla, (2) interruption in the continuity of fibres, and (3) destructive lesion of the posterior nerve roots, severing the nerve fibres from the posterior root ganglia. Besides the secondary degeneration proper, there is a traumatic degeneration, which is essentially inflammatory, extending for about one centimetre above and below the lesion, and affecting the whole diameter of the cord, but being more particularly marked in the course of the fibres of the ascending and descending tracts above and below respectively. There is considerable infiltration of leucocytes, and both the axis cylinders and the large cells of the grey matter are swollen and granular. Numerous lacunæ occur filled with "vitreous masses" (Homén), and also material referred to broken-down myeline and altered portions of axis cylinders. After experimental lesions, also, collections of purulent matter are found, but not in cases free from septic contamination, which, however, exhibit marked proliferation of endothelium in the perivascular lymphatics and great thickening of the neuroglia. (Specimens were prepared by hardening in bichromate of ammonia or potash, having been examined both before and after by the naked eye. Sections were stained by picrocarmine, cochineal, and by the special methods of Weigert, Pal, and Upson, after cutting in celloidin.) The changes have been observed in the living animal with the naked eye five days after the occurrence of the lesion, but after death they are obscured by the loss of translucency in the healthy tissue. After hardening in the bichromate the degenerated parts appear yellow on a brown ground, the change being well marked on the sixth day after injury. By the third day (Homén) the changes are only visible in the tracts above the lesion, appearing below on the fifth. At first the axis cylinders are swollen, and stain very deeply with carmine or acid fuchsin, refusing other dyes. Only the peripheral portion of the myeline remains, which has a strong affinity for the acid fuchsin stain and also for the Weigert hæmatoxylin, and has been called the "erythrophile substain."

CASE 1. *Fracture of Spine, with Compression of Cord between the Sixth and Seventh Cervical Roots.*—The anterior and lateral regions were chiefly affected, but many normal nerve fibres existed in all parts. The cord was obtained on the eleventh day. In the neighbourhood of the lesion were swollen axis cylinders, with a narrow ring of myeline staining with hæmatoxylin. These differ from the fibres in true secondary degeneration by their large size and affinity for carmine and aniline dyes, being less readily coloured by fuchsin. Sections above the fourth cervical and below the third dorsal exhibit only the features of a perfectly normal cord. It appears, therefore, that the changes are slower in man than in the monkey. The early chemical changes apparent to the naked eye appear to occur simultaneously throughout the length of the fibre, but the actual histological changes pass along the nerve fibre at varying rate. In the second week the axis cylinder and myeline are completely fused into a granular mass, having a rather larger diameter than the original fibre, and staining nearly black with the Weigert hæmatoxylin. In two months the myeline is absorbed, and the degenerated fibres refuse the hæmatoxylin; so that the degenerated area stands out colourless, or nearly so, against the rest of the section.

CASE 2. *Sarcoma compressing and destroying the Cord below the Sixth Dorsal Root, causing death after two months.*—There were granular changes, with fusion of the axis cylinder and myeline, followed by absorption, the pale ascending tracts being rendered conspicuous by Weigert's hæmatoxylin method, very little increase of nuclei or of neuroglia being seen. In other cases of five and six weeks' standing, though degenerative changes are obvious by the microscope the constant colouring with hæmatoxylin is not shown, owing to the myeline being still unabsorbed. After four months the appearances differ but little from those already described, the absorption of myeline is more complete, and the degenerated region therefore refuses the hæmatoxylin more completely and appears lighter. Sclerosis proceeds at different rates in different tracts, the ascending ones taking precedence. The posterior median column comes first, then the crossed pyramidal tract, afterwards the direct cerebellar, followed by the direct pyramidal. After five months there is distinct thickening of the neuroglia, the fibre spaces being now filled with homogeneous instead of granular material, and, although these are smaller, there is as yet no obvious contraction of the degenerated area.

CASE 3. *Softening of the Posterior and Middle Thirds of the Right Internal Capsule, attended by Paralysis of the Left Side of the Body, and later by Paralysis and Rigidity of both Arms and Legs, with Hemianæsthesia and Analgesia; fatal after five months.*—Post mortem, there was profound degeneration of the anterior median column or direct pyramidal, and of the crossed pyramidal tract; the latter most marked. Weigert's hæmatoxylin still stained the remains of nerve fibres, showing that the myeline was not yet completely absorbed. The neuroglia was much increased, as were also the nuclei, especially around the vessels. Some degenerated fibres were almost obliterated, while, on the other hand, many natural fibres were scattered through the degenerated area.

CASE 4. *Pott's Disease, with Compression of Cord in the Mid-dorsal Region; fatal after six months*—The ascending tracts, posterior median column, and direct cerebellar tract were deeply degenerated, the former consisting principally of dense connective tissue, though an occasional mass of myeline was seen faintly stained. There was still no obvious contraction of the sclerosed tissue. The process of degeneration is progressive, and is probably complete for all fibres in three months. Afterwards the diseased area becomes less conspicuous after hardening by the bichromates, and is found to consist only of connective tissue, which contracts and remains finally as a scar marking the site of the lesion.

Secondary spinal degeneration differs from the Wallerian degeneration of nerves principally in the absence of all active changes referable to the nerve corpuscles in the latter. In the cord, nerve fibres, severed from their trophic centre, simply die or undergo a change analogous to necrosis, their residue being removed by absorption and replaced by proliferation of the neuroglia. This process is of a languid nature, very different from inflammation, and inflammatory nuclei are conspicuous by their absence. Moreover, the true secondary degeneration is a very different matter to the traumatic change in the neighbourhood of the lesion, where, if anywhere, inflammation may be supposed to exist. On the other hand, in Wallerian degeneration of nerves, though

the breaking up and removal of the axis cylinder and myeline may be of an analogous necrotic nature, the enlargement and proliferation of the corpuscles of the primitive sheath are evidence of life and activity, and the occurrence of regeneration by the appearance of new fibrils within the sheath is an entirely additional feature.

The question of regeneration of fibres in the cord has been the subject of much controversy. Experiments on the lower animals point to the possibility of some amount of repair in them as we descend the scale, and also to its greater activity in young animals. In man, however, there is little evidence of this power, with the exception of a case under the care of Dr. Gowers and Mr. Horsley, in which complete recovery took place after removal of a tumour which, by indenting and pressing on the cord, had produced paralysis with increased reflexes in the lower extremities.

LECTURE II.

Commencing with a brief reference to early observations on degenerating tracts in the cord, and a short account of some of its grosser histological features, together with a sketch of the more obvious changes observed in the upper part of the central nervous system consequent on destructive lesions in the cortical motor area, the lecturer illustrated these by citing Case 3, in which a lesion of the middle and posterior parts of the right internal capsule was followed by complete degeneration of the longitudinal fibres of the upper and middle portions of the right pons, none being affected in the fillet. At the commencement of the pyramids there was great diminution in the area of the degenerated tract, referred to the constant giving off of fibres to the adjoining nuclei of grey matter. At the decussation the degenerated fibres could be traced to the opposite lateral tract, interlacing with healthy fibres; whilst, when decussation was complete, the affected strands were grouped together just external to the posterior horn, exhibiting in section a roughly triangular outline with the apex towards the centre, and having one side parallel to the grey matter, the base being parallel to the periphery of the lateral column, but not quite reaching it in the upper part of the cord. In dogs and monkeys the section was more nearly circular, and the results of experiments indicated that certain parts of the tract conveyed fibres from corresponding parts of the brain.

Case 5, being one of complete transverse crushing of the cord between the eighth cervical and first dorsal roots, exhibited extensive traumatic degeneration of all fibres, except those in immediate contact with the central grey matter, for a distance of one inch below the injury. Opposite the second dorsal root the crossed pyramidal tract had its greatest development, diminishing thence downwards. This tract has been stated to end at the level of the second lumbar root, but degenerated fibres can be found as low as the fourth lumbar, or even lower. The crossed pyramidal tract does not reach the edge of the section above, as the direct cerebellar tract intervenes, but it extends to the surface in the dorsal region, commencing between the sixth and eight dorsal roots. Retaining its shape and position close to the posterior horn in the upper part of the cord, it leaves this lower down, and comes to be represented only by a small patch at the periphery of the lateral column. Though the degenerated fibres have not been definitely traced into ganglion cells, and maintain a position in the section as remote as possible from the anterior roots, yet, as most careful examination has failed to detect any degeneration in these roots, it is highly probable that the fibres of this tract form connexions with the ganglion cells of the grey matter. On physiological grounds it is certain that they do not cross, at least as a whole. The direct pyramidal tract consists of fibres, which on leaving the pyramid do not cross, but run down in the anterior median column on the same side. In its fullest development it extends the entire length of the anterior fissure. The area of degeneration may extend to the anterior roots along the outer edge of the section, and any lessening in size also occurs in this region. Secondary degeneration of this fasciculus is always associated with that of the crossed pyramidal tract, and has never been observed alone. Pitres has shown that it is sometimes affected in cortical lesions of the brain, and that sometimes both sides are degenerated with a unilateral lesion. Bouchard stated that the tract did not reach beyond the mid-dorsal region, but in Case 3 it was distinct to the eleventh dorsal root, and in another case could be recognised by the naked eye as low as the second lumbar. It is almost certain that the fibres cross in the cord, probably in the anterior commissure, as in cases of its degeneration no paralysis occurs on the same side. It appears to contain motor fibres, distributed, according to Gowers, principally to the upper extremity, but may possibly contain many commissural fibres.

Recrossed fibres.—Pitres cites ten out of forty cases of hemiplegia from unilateral lesion, in which degeneration of the pyramidal tract of the same as well as of the opposite side was found. In some it was of equal intensity on both sides; in others it was less on the same side. In six the direct pyramidal tract on the same side was affected, and in three there was degeneration on both sides. The pyramid of the opposite side was quite unaffected. Clinically also there are indications of degeneration on the same as well as on the opposite side to the lesion. Pitres considers that fibres from the pyramid of the medulla may pass into the crossed pyramidal tract, the direct pyramidal tract, and the pyramidal tracts of the same side. Charcot suggests the recrossing of fibres from the crossed pyramidal tract through the anterior commissure, but there is at present no anatomical evidence of this. Sherrington states that the recrossed tract does not appear till about the third cervical root; the degenerated fibres are few, and extend but a short distance down the cord. In monkeys examined by the lecturer after experimental interference by Messrs. Horsley and Spencer, there was obvious degeneration of the crossed pyramidal tract and very scanty degeneration in the corresponding tract of the same side as the lesion. Homén also, after semisection of the cervical region in dogs, found distinct degenerating fibres in the opposite lateral tract, commencing 1 cm. below the lesion, and traceable as far down as that on the injured side. There was at the same time degeneration of the anterior pyramidal tract. Descending lesions are also exhibited by scattered fibres in the antero-lateral and anterior root zone in Case 5 and Monkey 7. In this mixed zone degenerated fibres can be detected as low as the eighth dorsal root, and in the anterior root zone to the sacral region. For a short way below the lesion, changed fibres are found in the periphery of the opposite lateral column in a position respected by the ascending fibres of the direct cerebellar tract in the section above the lesion.

Postero-lateral descending degeneration, "comma-shaped tract," occupying the centre of the column with a rounded head and thin curved tail extending almost to the periphery, is rarely absent. In Case 5 it was well marked and traceable by the microscope below the mid-dorsal region. In another similar case it was traceable to the sixth dorsal root. It was found on the same side after semisection in monkeys, and is best marked after lesions high up in the cord. The fibres are most probably commissural.

Fibres degenerating upwards.—Immediately above the lesion (1 to 2 cm.) traumatic degeneration affects most of the section, sparing, however, the lateral limiting layer around the grey matter, and influencing most deeply the posterior parts and periphery of the section. The postero-lateral column shows normal fibres at the second root above, and the area degenerated rapidly decreases upwards until at the fifth root it assumes its normal dimensions. This is due to the number of unaffected fibres entering at the posterior roots and the numerous commissural strands, this column being a principal conductor of the posterior root fibres. The postero-median column exhibits only a narrow strip of degeneration along the whole length of the posterior fissure, receding backwards so as essentially to form a small triangle only, at the extreme posterior extremity, when the lesion is low down. This diminution is due to fibres passing in from the postero-lateral tract. In tabes dorsalis the postero-lateral columns are affected below and the postero-median only above. Some fibres traverse the entire length of the column to the medulla. There is probably no crossing, and the fibres appear to terminate in ganglion cells of the posterior vesicular column, arranged in groups in the upper region of the cord, whilst others end in the grey matter which projects backwards into the posterior column in the lower part of the medulla: the postero-median column here being called the processus gracilis, with the nucleus gracilis; and the postero-lateral column, the processus cuneatus, with the nucleus cuneatus. When the degeneration is extensive, the altered fibres occupy a position both inside and behind the nucleus gracilis; when solely of posterior root fibres, on the inside only.

Result of division of posterior roots.—A monkey, in which all the posterior roots of the cauda equina on the right side were divided, exhibited loss of common and pain sensation, also probably of muscular sense, and absence of the knee-jerk on that side. Examination of the cord disclosed degeneration only at the top of the posterior horn, opposite the fifth lumbar vertebra. Ascending, the degeneration gradually spreads inwards, reaching its maximum at the first lumbar, where it involves the entire posterior region except the unaffected entering fibres at the extreme tip of the posterior horn and a small triangle at the posterior extremity of the median fissure, which is composed of firm nerve fibres extending the whole length of the column. The posterior median column is most deeply affected opposite the eleventh dorsal nerve, the area of degeneration diminishing upwards above this to a small patch against the posterior septum rather below its middle. The degenerated fibres entering between the third and fifth lumbar inclusive appear to pass up in the grey matter of the posterior horn to join the ganglia in the posterior vesicular column, some passing forwards to join nerve cells in the anterior horn. In a second monkey, in which the posterior roots of the last dorsal and upper three lumbar nerves were divided, corresponding changes could be recognised, there being especially a great dearth of fibres in the grey matter of the posterior horn, the central and lateral regions, and the vesicular column, and even a diminution in the anterior horns of the injured side. There was apparently no change in the ganglion cells. In both experiments the posterior columns were alone affected, the direct cerebellar and the antero-lateral tracts escaping entirely. In man, there is no reason to believe that degeneration commencing in the peripheral nerves can extend past the root ganglion to the cord. When, however, lesion of the roots has occurred, secondary degeneration has followed the same path indicated by experiment. In a case of locomotor ataxy affecting only the cervical and upper dorsal region reported by Dejérine, there was most intense degeneration of the posterior roots of the affected region, with sclerosis chiefly of the postero-lateral column below and of the postero-median above—sparing, however, the small triangular fasciculus at the extreme end of the median fissure. Lange also records a case in which all the signs of locomotor ataxia were produced by a tumour pressing on the posterior roots of the cauda equina, attended with ascending degeneration to the dorsal region. Most of the lower posterior root fibres pass into the postero-lateral column, whence they enter the posterior horn and join the ganglion cells in the posterior vesicular column and anterior horn, or pass into the postero-median column, and are conveyed to the nucleus gracilis of the medulla, the function of these last being principally visceral. There is a crossing of the fibres in the grey matter of the cord.

LECTURE III.

The direct cerebellar tract is most constantly degenerated after the posterior median column. It is situated in the periphery of the lateral column, extending forwards from the region of the posterior bone to about the middle of the arc of the lateral column. Schultze cites a case of fracture of the ninth dorsal vertebra, causing compression of the cord opposite the tenth pair, in which was an area of degeneration extending round the periphery of the section from the posterior to the anterior roots, and continued up to the cervical region. In a case described by Gowers the crush was situated opposite the eleventh dorsal, and though the antero-lateral tract was affected, the direct cerebellar tract was not degenerated at all. From these two cases it may be inferred that the lowest point of origin of the fibres of the direct cerebellar tract is between the ninth and eleventh dorsal roots, though it is probably usually higher up. Kahler and Pick quote twenty-seven cases of transverse lesion, in all of which the posterior column was affected, and in those above the ninth dorsal the direct cerebellar tract as well, this tract not being degenerated when the lesion was below that point. In a case of compression from a tumour at the sixth, seventh, and eighth dorsal vertebræ, sections at the first dorsal showed the direct cerebellar tract to be plainly degenerated. There are also many normal large fibres and a few small, only those of the former kind being degenerated, unless the others have been completely absorbed. The large amount of tissue intervening between the fibres is evidence that many have so disappeared. From these facts it is obvious that new fibres are entering, principally of the large variety. Anteriorly, the great majority of fibres in the antero-lateral tract are degenerated, both large and small. The sign of direct cerebellar tract degeneration diminishes upwards, till at the level of the fifth cervical it is quite distinct and gathered into a small patch against the top of the posterior horn, where, however, it contains many normal fibres. At the second cervical only one or two isolated fibres mark the degeneration in this tract; at the same time the antero-lateral tract remains highly degenerated. The direct cerebellar tract, then, if degenerated secondarily to lesions of the *lower* dorsal region, is small, and tends to disappear before reaching the medulla. If the lesion is high up in the cord the distribution is different. In Case 5, in which the injury occurred between the eighth cervical and first dorsal, the whole of the antero-lateral region is affected immediately above the lesion, with the exception of a few fibres immediately adjacent to the grey matter. Ascending root by root, the area involved diminishes, and there is a tendency to separation into an antero-lateral and direct cerebellar tract by the invasion of a mass of normal fibres, the two, however, being closely associated again in the lower part of the medulla.

There is anatomical evidence of the origin of the direct cerebellar tract in the posterior vesicular column of Clarke extending from the eighth dorsal to the second lumbar, and appearing again above in the upper cervical region and medulla, which is admitted by most to be in connexion with the posterior roots. There is ample proof that its fibres do not come from the posterior roots of the lower extremities. Dr. Gaskell has given the most convincing reasons for regarding the posterior vesicular column as intimately connected with the visceral system, the nerve fibres of which are of the very finest calibre, corresponding to those passing to and from the vesicular column. An examination of the normal cord in monkeys shows these fine fibres to preponderate in the direct cerebellar tract just external to the posterior roots in the lumbar and lower dorsal region, becoming fewer in proportion to large ones up to the seventh cervical, whence they are practically absent up to the level of the first. In a monkey in which the posterior roots of the sixth, seventh, and eighth cervical and first dorsal nerves were divided, there was anæsthesia of the left upper extremity, and the animal was killed on the twenty-eighth day.

At the level of the first dorsal there is a slip of degeneration in the postero-external column close to the posterior horn. A root higher there is extensive degeneration of the posterior region, with the exception of a small wedge at the extremity of the posterior septum, and complete and absolute degeneration of that part of the direct cerebellar tract lying next the posterior horn (the part which consists of large fibres only). This is continued up the whole of the cervical region to the medulla in the restiform body. From this it appears, then, that the fibres of the posterior cervical roots, and probably of the upper dorsal, enter largely into the formation of the direct cerebellar tract. In cases where the roots of the *lower* cord were divided, the fact was emphasised that this tract was not affected, showing the difference in composition of this tract in the upper as compared with the lower region of the cord. The fine fibres in the periphery of the lateral tract in the lower dorsal region cannot be ascending ones, or they would degenerate upwards. At the level of the seventh or eighth dorsal the fibres of the crossed pyramidal tract come to the surface and take the position of the direct cerebellar tract. This descending tract contains vast numbers of fine fibres. It is highly probable, then, that these are the fibres seen in the peripheral part of the lateral column in the lower dorsal region, and it is extremely likely that they enter into communication with the cells of the grey matter, probably of the posterior vesicular column, and that they are the fibres which have been seen crossing the lateral column. There can be little doubt that many of the fine fibres in connexion with the posterior vesicular column do ascend, either in the posterior median column or in the antero-lateral ascending tract. This tract occupies the anterior part of the lateral column or "mixed zone" between the anterior root zone and direct cerebellar tract, with which in places it is continuous. It forms a wedge-shaped area, with its base at the periphery and its apex towards the grey matter, or sometimes deflected so as to insinuate itself between the crossed pyramidal and direct cerebellar tracts. The antero-lateral tract

exhibits degenerated fibres in all transverse lesions of the cord, even when too low down to affect the direct cerebellar tract, pointing to the origin of its fibres in or below the lumbar region. The absence of degeneration after section of the posterior roots shows that some of the fibres are derived from them, and if further proof of its existence as a tract distinct from the direct cerebellar is required, it may be said that Bechterow has described it developing at a period distinct from other parts of the cord. The antero-lateral region contains many fine fibres like the crossed pyramidal tract and posterior median column, more particularly in the lower parts of the cord, though they are still numerous in the cervical region. Their diminution here may be due to the absence of any true posterior vesicular column. It is therefore suggested that the antero-lateral fibres arise solely from the grey matter; its fine fibres, which are very numerous below, are centripetal from the posterior vesicular column, the large fibres being in connexion with groups in the anterior horns.

In a case of locomotor ataxy with sclerosis of the antero-lateral and posterior regions, contributed by Drs. Hadden and Sherrington, the area of fine fibres in and about the posterior horn (Lissauer's tract) was profoundly degenerated, as were also those of the posterior vesicular column, whilst, though no degeneration of the ganglion cells here was visible, there seemed to be a diminution in number of the larger variety. The degenerated fibres in the lateral column, though diffused at first in the mid-dorsal, are concentrated into the antero-lateral tract in the cervical region, and can be traced up to the medulla. This seems to confirm the idea that the antero-lateral tract fibres are derived from the posterior vesicular column. It is possible that the primary lesion may be in the fine fibres (Lissauer's tract), and that there may be degeneration of the post-vesicular column, leading to a corresponding degeneration in the antero-lateral tract.

As to the termination of these two ascending tracts. The direct cerebellar tract maintains its position close in front of the posterior horn, where it expands above into the tubercle of Rolando; a little higher it lies in front of the ascending root of the fifth nerve, which later passes forward between this tract and the substantia gelatinosa, just before the direct cerebellar tract enters the restiform body. The degeneration may be traced up to the point where the tract lies between the roots of origin of the eighth nerve; here the fibres take an oblique direction to pass to the cerebellum, and are very difficult to follow, but experiments on animals indicate the termination of this tract in the superior vermiform process of the cerebellum. The antero-lateral tract, as seen in monkeys after experimental lesions of the cord, is distinct from the direct cerebellar at the level of the first cervical root; higher up, however, the two approach one another, and at the level of the commencement of the olive appear as one long tract along the lateral periphery of the section. At the point where the direct cerebellar tract passes behind the ascending root of the fifth, the two are again separated by normal fibres. Above this some fibres may be traced near the periphery of the medulla in the angle between the olive and the surface as far as the point of exit of the seventh and eighth nerves. Loewenthal performed a transverse section of the cord, the result being degeneration of both direct cerebellar and antero-lateral tracts. He traced the latter, under the name of the "ventral cerebellar fibres," through the pons into the superior peduncle of the cerebellum. It is possible, then, that the fine fibres of the tract end in the nucleus lateralis, and that the large fibres gain the cerebellum by way of the superior peduncle.

Visceral nerve fibres, medullated and of the finest calibre, form the white rami communicans constituting the visceral branch of every typical spinal nerve. These fine fibres, afferent and efferent, appear in the posterior and anterior roots respectively, and are connected accordingly with the ganglion of the root or the adjacent visceral ganglia, in which they lose their medullary sheath. The conception of the nerves and roots of a typical spinal segment would be: 1. A posterior root, with a ganglion having a fixed position, the root being made up of large fibres (somatic) and small fibres (splanchnic), afferent in direction. 2. An anterior root, consisting of large and small fibres not in connexion with any ganglion, and a number of small fibres which are in connexion with ganglia; but the ganglia are remote and of no fixed position.

In the cervical region the upper roots of the spinal accessory and the lower roots of the vagus contain all the visceral fibres arising from that part of the cord. They pass to the ganglion of the vagus trunk, where many of them lose their medulla. In the sacral region these fibres appear as the nervi erigentes, so that there are three principal outflows of visceral nerves, representing the cervical splanchnics, the abdominal splanchnics, and the pelvic splanchnics. In the cord the fine fibres either occur in bundles by themselves or mixed with the large fibres, and terminate in the ganglia of the grey matter. Efferent visceral fibres occur plentifully in the anterior pyramids of the medulla, the pyramidal tracts above in the pons, and the crossed pyramidal tracts all the way down the cord. Afferent fibres ascend in the mixed zone of the antero-lateral tract, in the border zone between the posterior horn and point of emergence of the posterior roots, in the posterior median column, and especially in the wedge-shaped area at the extreme posterior end of the posterior septum.

ABSTRACT OF

The Lumleian Lectures

ON

ENTERIC FEVER,

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BY JOHN HARLEY, M.D,

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LECTURE I.

THE disease which I have selected for consideration in the lectures which I have the honour to deliver to this College is one of vast interest and importance, for it knows no local bounds, flourishes equally well in the crowded city and in the open country, and lays low alike the strong and the weak, the rich and the poor. History deplores that which should give encouragement to the advocates of peace, for whenever a nation selects her hardiest and healthiest sons, and sends them ever so well provided upon a military expedition, many more succumb to disease than are destroyed by the enemy. Indeed, some patient and politic commanders have been satisfied to entrust the disorganisation and destruction of an army solely to the sure and unrelenting hand of disease.

In considering this subject, I propose first of all to search for its origin, then to trace its association and relationship with other diseases in further illustration of its origin, and lastly to call attention to the treatment of the disease, the materials serving for this purpose being the cases which have come under my care in St. Thomas's Hospital during the last ten years and those whose histories are given in the Medical Reports of the War of the Rebellion of the United States of America. In considering the etiology of enteric fever, I shall not confine my inquiries to a narrow field, but shall be prepared to find a variety of influences accidentally combining to produce the same result—the development of enteric inflammation. We are all assured that filthy air and filthy food or drink are producers of enteric fever, and inferentially we may go a step further and concede that filth generated within will also produce it. Science, however, is not satisfied with generalities, but seeks to know the immediate cause, to isolate the simple factors, and then to ascertain how these can set up a specific morbid action; but the more the view is narrowed the greater do the difficulties become. Granted, for example, that water which has filtered through cesspools a little higher up the valley is the cause of an outbreak of enteric fever in the village below, what particular constituent of this fluid is it that produces the disease? Is it a chemical compound, or is it an organised body? If it be the former, it exists in such tenuity that the chemist fails to detect its presence; if it be the latter, it is a microscopic dot.

Micro-organisms exist in the clear limpid sewage filtrate which causes enteric fever, and they also abound in the stools of patients suffering from this disease. But what of these? Within the last few years the influence of micro-organisms in the production of disease has engaged the

attention of a large number of observers, who have pursued this attractive study with an ardour which has never been exceeded in the progress of medicine. They have isolated and exposed to our wondering gaze the concrete essence, the absolute and visible germs of vaccinia, of variola, of scarlatina, of tubercle, of syphilis, of cholera, of enteric fever, and indeed of almost every other important disease, and they have employed their leisure in cultivating these dreadful germs, and they handle them with a freedom and impunity that the cobra charmers might envy. It is interesting to witness the effect of these astounding revelations; the novelty and the simplicity of the discovery, and the complete absence of everything like doubt or hesitation in the announcement one after the other of these discoveries, have made an easy conquest of medical opinion, and at the present time the bacteriological laboratory is a necessary adjunct, not to say an important department, in all the more advanced of our medical schools In one little field of vision we may see, side by side, the germs of almost every disease, and the medical tyro readily enumerates the distinctive character of each of these seeds of woe, while he attributes to each its specific power.

But our admiration is not allowed to stop here. It has been shown that these agents may, by successive cultivation, be robbed of their fatal power and brought into beneficent subserviency to human beings; and yet, further and more wonderful than all, a microbe thus tamed by culture, thus robbed of its fiendish power and converted into a ministering angel, may be set on the track of an incubating disease, and it shall arrest even rabies in its baleful course, and, having arrested, annihilate it. Such are some of the very surprising results of our very brief acquaintance with micro-organisms. When we know them better and can consult their peculiarities, direct their antipathies, regulate their interactions, and, it may be, utilise their very gambols, who shall presume to say that we have not passed the "winter of our discontent," and reached a point whence we can descry a happier future for man and beast. But while a goodly number of intelligent observers, impelled by enthusiasm and unrestrained by caution, are attracted by the glare of these splendid discoveries, there are others of a slower and less credulous temperament, who, while they yield to none in their desire for truth, would have every observation leading to its elucidation tested with the most scrupulous care and rendered unassailable on every side. To minds of this mould, objections present themselves which have been overlooked or but lightly regarded by observers of the other class. First, that the healthy body is endowed with a superabundant store of vitality, which enables it to resist the encroachments of the lower vegetable organisms; and that it is only when a depression of this force sufficient to place the individual in a condition very near its extinction occurs, that the body is liable to their invasions. Secondly, time is a very necessary condition for the development of micro-organisms; and in the sudden transitions from health to disease occasionally witnessed there is no time for the growth and general dispersion of the micro-organisms. Thirdly, in the production of disease by inoculation something besides the germ is introduced—to wit, the animal fluid in which it floats. Fourthly, it must be conceded that in any given culture out of the body the micro-organisms are but the outcome of the changes going on in the albuminous medium. Fifthly, in the production by cultivation of those germs which are said to retain their virulence, no attempt has been made to distinguish between the action of the micro-organisms themselves and that of the attendant fluid. To assume that it is the micro-organism and not the fluid which produces a given result after inoculation is to exclude one half of the facts from the argument, and, it may be, the more important half.

From the foregoing considerations, I think it unreasonable to assent to the germ theory of disease, and I can only regard it as another of the many instances in medicine and out of it where cause and effect have not been discriminated. Setting aside, therefore, this theory, I shall endeavour to prove that the disease under consideration is merely the effect of derangement of function. I trace those variations of health which constitute disease to two causes, acting either separately or together—viz.: (1) a variation of the external conditions of life; and (2) a diminution of the oxydising action of the blood, either from some fault of the hæmoglobin or of the protoplasm to be oxidised. Given pure air, an equable temperature and moisture, with muscular exercise proportionate to the nutrition of the body, the living being is attuned to the conditions of his existence; the fire within burns steadily and cheerfully, and the products are normal and proportionate in amount. Let disproportion now arise in any one of these conditions, and an abnormal and, so far, morbid state results. Within certain limits the healthy body can accommodate itself with facility to considerable variations in the external conditions, and those are the delicate who cannot readily do this, and who, in the transition process, are liable to develop abnormal action, or, in other words, disease. These are truisms which in the present phase of medical thought will bear repetition, and, as I hope to show further on, they are very applicable to the subject which we have under consideration. In a large community there are many persons possessing identical constitutions, and of these there are, at any given time, some who are in an identical state of body; if these are simultaneously exposed upon the same soil, to the same heats and chills on the same day, we should expect in the main the same results to follow, it being in such a case both unnecessary and unreasonable to assume contagion, each case of illness rather being an instance of the spontaneous origin of a distinct set of symptoms common to all, the necessary outcome of the reciprocal play of definite intrinsic and extrinsic conditions.

But as the question of contagion often arises in respect of enteric fever and its congeners, it will be necessary for me to say a few words on this subject. There are two diseases, syphilis and variola, in which we recognise a specific poison, capable, when inoculated, of reproducing its kind; and this fact has taken such a hold upon the mind that whenever one or other of these diseases presents itself we have no hesitation in concluding that it has originated in contagion, and the idea of its origin *de novo* is not entertained. To my mind this seems very superficial and unreasonable, for it denies the uniformity and universality of the laws of nature. For the reason that I have stated in the earlier part of my lecture, endemic disease is continually apt to be regarded as contagious, and this is particularly the case with enteric fever. Dr. Collie, in his report of the Metropolitan Fever Hospital at Homerton for 1879, adduces evidence to show that the occurrence of four cases of enteric fever among the nurses was due to personal contagion from cases in the wards, but I am compelled to say that I regard his evidence as inconclusive.

The following case furnishes, I think, stronger evidence of the direct fæcal convection of enteric fever than that contained in the above report. A girl aged nineteen, who had been in St. Thomas's Hospital for a month with gastritis, anæmia, and constipation, contracted enteric fever while still an inmate of the ward, the attack being of a severe character. Like most of our cases at St. Thomas's Hospital, there was constipation throughout, requiring the frequent use of enemata. She was treated by enemata the whole of the month before the enteric fever developed, and, there being but one instrument in the ward, it was used for this case in common with four enteric fever cases which often required it, and also occasionally for two or three other patients. That the disease was conveyed by the enema apparatus was doubtful; the patient was certainly predisposed to an attack of enteritis, for obstinate constipation had existed for many weeks, and constipation is, I believe, the predisposing cause of many an attack of enteric fever; besides, none of the other three patients who used the enema apparatus were affected.

As I wish hereafter to speak of the relationship of enteric and scarlet fever, and as we are still considering the subject of contagion, I cannot refrain from narrating my own experience of scarlet fever in this respect. Scarlet fever is regarded on all hands as pre-eminently contagious, but although I have been endeavouring all my medical life to obtain proof of it, as yet I have failed to find it, but have acquired some evidence to the contrary. I have seen whole families affected, falling ill one after another, and I have witnessed, as I supposed, the operation of an endemic cause. I have never known imported cases propagate the disease, and I have never witnessed its spread, under the most favourable circumstances, among the convalescents in the fever hospital. During my connexion with the London Fever Hospital I did not contract scarlet fever, though I had never suffered from it; but eight years after my connexion with that institution ceased, I experienced a sharp attack at a time when I had not to my knowledge

been in contact with any case of the disease. I am convinced that a chill was the sole cause of my attack, and I adduce it as an instance both of the spontaneous origin of scarlet fever and of its inability to spread, for neither my guests nor any member of my family caught the disease. Scarlet fever thus resembles common catarrh, springing up in households here and there, affecting some members simultaneously and others after intervals. The scope of these lectures will not allow me to pursue the subject of contagion further, and I hope I have adduced evidence sufficient to entitle me to keep this misleading hypothesis in the back-ground while I carry my inquiries into the etiology of enteric fever a little further.

Turning first to the histories of my own cases, I find that my clinical clerks have recorded the following causes. In four cases, two being males and two females, their ages ranging from twelve to forty, the onset of the disease was accompanied by the catching of a severe cold, with chills and headache; in six cases, five males and one female, their ages ranging from twelve to twenty-three, the illness began with getting wet through. The cases themselves were severe ones, as is proved by their prolonged stay in the hospital and the death of two of the patients. Shall we, in the face of such unbiased evidence, say that some other cause is needed to explain the origin and development of enteric fever? If we say that a wetting on a cold day, in either summer or winter, is not of itself enough to kill a strong man, we deny a daily experience. In killing him it causes a severe internal congestion, and this being so, why and how should the mucous surface, the more vascular internal skin, escape? The intestines, from their arrangement and the length of their bloodvessels, are the part of the body most of all liable to congestion, and yet modern medicine can only recognise the existence of an enteritis under the form of a specific fever, with its incubation period, its days, its specific ulceration, and its specific poison. Such metaphysical scholasticism is not science, but the very sublimation of presumption, for it takes things for granted which have never been proved, but, on the contrary, can be easily and completely disproved. In order to open up a free and unbiased view of enteric fever, I have thought it necessary to declare my views thus strongly; it is nearly twenty-five years since I first broached them in the first volume of Reynolds' System of Medicine, but the influence of a scholastic training would, I felt convinced, prevent their recognition, and that nothing short of a military campaign would suffice to expose the true nature of enteric fever, by demonstrating its natural associations, and proving that its development is but a mere accident in the progress of those severe congestive strains of the internal organs which always happen to those who, imperfectly protected against diurnal variations of temperature, are exposed to the exigencies of warfare. Such evidence is now available, and is contained both in the history of the Franco-Prussian War and that of the American War of the Rebellion, the latter of which I shall take for my present purpose. It is compiled from the reports of a great number of competent observers, and collated and revised with the greatest care; but the reader of this treasury of medical experience will not fail to observe that, with few exceptions, the labourers employed in its formation have been strongly influenced by the sophistry of the schools. Being bound by artificial restrictions, they are at their wits' end to know how to classify their cases: whether, for example, this particular one shall go among the malarial or the typho-malarial, or whether it does not properly belong to a specific typhoid. As a matter of fact, they—*we*, I should say—shackle ourselves with the prejudices derived from our teaching, and we weave a veil through which it is difficult to see nature. It is easy to learn, but next to impossible to unlearn, so indelible are early impressions. How careful therefore, as expositors of nature, we should be that our teaching may be so true and simple that there shall be nothing of it to unlearn.

OXFORD EYE HOSPITAL.—The report of the Committee for 1888 states that in spite of the grave difficulty and hindrance caused by lack of room, the Oxford Eye Hospital has steadily increased the range of its work. The total number of attendances at the hospital between Jan. 1st and December 31st was 8869, the number of new patients was 1234, and the attendance has now reached an average of 188 patients per week. Funds are needed in order to transfer the hospital to more adequate and convenient premises.

HYSTERICAL AMBLYOPIA.

By C. S. JEAFFRESON, F.R.C.S.,

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I SOUGHT in vain for some appropriate title for the subject of this paper, and the reader must not be deceived by the one I have chosen. It does not refer to the class of cases of hysterical hemianæsthesia with crossed amblyopia so ably discussed by Charcot and ophthalmoscopically investigated by Landolt, but to an equally interesting group of cases. Some persons might perhaps think, after reading the remarks I am about to detail, that "feigned amaurosis" might have been a more appropriate title. I shall not be disposed to agree with them. The motive which impels a recruit or a schoolboy to feign blindness for his own personal advantage, and the aimless mimicry which leads a young woman for months, and sometimes for years, to simulate blindness and subject herself to all kinds of severe treatment and disagreeable restrictions, have not their origin in the same psychological conditions. In the one, the will is all powerful and acting in the direction desired for a given and definite purpose. In the other, the will is in abeyance and the body is abandoned to the extraneous influences of strong impressions. The subjects of hysterical amaurosis have, in my experience, all been young women, and they have all suffered more or less from some form of menstrual irregularity, but I cannot say that this played anything but a secondary part in the production of their maladies, for in two of them their chief symptoms were got rid of, despite the persistence of these irregularities. Practitioners should all be on their guard against the possibility of meeting with these cases. Though by no means common, they are in my experience far from being rare; sometimes they are difficult to diagnose, and always cause some trouble on account of the anxiety of friends and parents, and the unwillingness with which any suggestion of hysteria is met by them.

E. M——, aged nineteen, was brought to the Eye Infirmary by her mother, who gave the following history of her case. She was one of a family of three children, all healthy. She had always been a bright and active child. She commenced to menstruate at fourteen, and had been quite regular till about two years ago. Since then she had been in a situation, and had been rather overworked, but still was satisfied, and liked her place and her employers, who were very kind to her. About a year ago, when at home one Sunday on a visit to her parents, she stated that she found the sight of one eye failing, but did not call particular attention to it, and her parents did not take much notice. A few weeks afterwards this eye, she said, had become much worse. Then she complained of the other. She was now taken to a medical man, who said she had slight inflammation of the nerve, and treated her actively with blisters. One morning, on waking, she found herself totally blind, and could not distinguish light from darkness. Her mistress was most anxious and kind to her, and sent for her own medical man, who recommended her removal to an institution. She was accordingly sent to a hospital and remained there six weeks. She did not improve, and had been in much the same condition since. She had been pronounced a case of hopeless blindness, and had not received any treatment during the last three months.

When the patient was admitted to the consulting-room I noticed the peculiarity of her gait, and pointed it out to the students and several medical men who were present. I will endeavour accurately to describe it, for it enabled me in my own mind to formulate a diagnosis, and, without speaking to the girl or letting her hear, I stated that I thought we should find we had to do with a case of hysterical amaurosis. Her entry was quite a triumph of histrionic power: head erect, eyes wide open and staring, and both hands stretched out in front of her as though in danger of obstacles. She gradually allowed herself to be half dragged, half pushed to the desk amongst the pitying ejaculations of the crowd of out-patients. "Poor thing!" "How sad!" "So young too!" was heard on all sides, and no doubt these expressions of pity stimulated her efforts.

Here I would point out that there is usually an essential difference in the way in which persons who simulate blindness try to grope their way about. The really blind feels

cautiously what he comes in contact with, investigates it, so to speak with the hand before he uses it as an object to direct his steps by. The hysterical patient knows where the thing is and what it is. He just touches it as he proceeds more after the fashion of a person who is weak and tottering and requires support. A really blind person, if the blindness has commenced suddenly, usually at some time or other breaks or damages some articles, or not infrequently inflicts upon himself some minor injury. The hysterical never do this.

An examination of the eyes superficially showed nothing abnormal. The pupils were large, and appeared abnormally dilated, but they reacted well to light. The movements of the eyes were perfect, and ophthalmoscopically there was nothing to be noticed. Both discs were of normal tint and vascularity, and the vessels of the fundus of normal size. The girl persisted that she was absolutely blind, and could not detect day from night, not even the brightest sunshine. It was useless, then, to try any ordinary test. I had therefore to resort to artifice, and, knowing that curiosity is the weak point of female human nature, I resolved to set a trap. A room was specially prepared, and the plan of everything upon the table carefully adjusted. Confidential-looking letters and tempting photographic albums were there ready to reveal their secrets, and the young woman was placed in a chair and specially cautioned not to move about lest she should upset anything. After an hour's patient waiting she was removed from the room, and a careful examination made. Some of the letters and papers had unquestionably been moved and all the albums examined! I now felt certain of the diagnosis, but I mentioned nothing to the mother on that occasion. I explained to the girl in kind but unmistakable language that I could find no disease in the eyes, that I thought therefore there would be nothing serious amiss, and added, in a suggestive sort of way, that I hoped she would be better at her next visit, or I should have to adopt severe and very disagreeable treatment.

In four days she returned, and was again led into the room. She now admitted that a little light had become visible to the right eye, and I therefore determined to test her with prisms and a gas-burner. Having closed both her eyes temporarily, and placed a strong prism base downwards before the right eye, she was taken into a dark room and placed before a gas jet. Immediately the bandages were removed I explained to her that I should wish to know how far the two lamps appeared apart, and their relative positions. This plan is much better than asking patients to name the number of lights they see, because the mention of numbers itself suggests ideas to the patient, and instinctively they connect the two eyes with the two lights. She was not to hesitate, but speak at once. The bandage was removed, and she said at once, "The two lights are a foot apart, one above the other." Finding by our exclamations and remarks that she had evidently done something she should not have done, she immediately attempted to correct herself, and, when further questioned, maintained she could only see one light. When pressed and somewhat bullied, she burst into tears, declared that the test hurt her, and that she would submit to it no longer. During the progress of crying several large tears had fallen upon her dress. These I noted she carefully wiped away with her handkerchief, although she could not, had she been blind, have been aware of their presence. I now took the girl into a private room and had some conversation with her. I told her I was convinced she could see, and spoke to her of the wickedness and folly of her conduct. She nevertheless maintained her previous assertions. I subsequently had some conversation with her mother. I explained to her the nature of the case and the value of the tests adopted. I recommended her to keep a careful watch on the girl day and night, and to bring her back at the end of a week. I could see that the mother regarded my suggestions with incredulity, but she promised to carry out my instructions.

At the expiration of the appointed time the patient did not return, and, after waiting a few days, I wrote, requesting that the patient might be brought to me, but received no communication in reply. Being determined to find out the subsequent progress, I sent an assistant to interview the family. He returned with the following statements: The girl was now quite well, and had recovered her vision perfectly. The restoration occurred suddenly in the night three days after she was at the infirmary. The relatives had not answered my letter because the girl refused to come and see me under any circumstances. They promised, however to try to persuade her to come at some subsequent period. A fortnight afterwards she came alone to my consulting-rooms, and I had some conversation with her. She maintained strenuously the genuineness of her malady and the miraculous nature of the restoration to sight, but in no way connected it w th her visits to or treatment by me. I subsequently learned that the girl had a first cousin who really was amaurotic, and that long before the commencement of her symptoms my patient had been staying for a few months with this family. I have no doubt that the nervous system received at that time, perhaps in a more or less unconscious manner, the strong impressions which resulted in the mimicry of the real affliction. It seems almost incredible that for months a patient should keep up the disagreeable restrictions upon herself which are necessary for the simulation of blindness; yet this girl did so. She never went out without being led, and when in the house she always remained in the chimney corner. She groped her way about the house as if in perfect darkness. No one doubted her blindness, and the question even of a blind asylum had been mooted, and steps had been taken to secure her admission.

The second case in some respects resembles the first; nevertheless I think it will be advisable to give it *in extenso*.

B. E——, a young woman, was brought to my consulting-rooms at Saville-row a few weeks ago by her father. She is a pale, somewhat delicate-looking girl, but has never had any distinct illnesses. She commenced menstruating at fourteen years old, and has been regular up to the last six months, when, for some unknown reason, the function has ceased. She has been in service up to the last few days, and likes her situation and her employers, but has been obliged to leave owing to her eyesight. She is now almost completely blind, can only see a glimmer of light in the left eye, and requires to be led about wherever she goes.

The history of the attack is as follows. Six months ago she had an attack of inflammation (?) in the right eye. She treated it with a little lotion she got from a chemist, but when the attack subsided she found that she was blind. She made no complaint specially, though she mentioned the circumstance to her mistress, who pressed her to get some advice, but, as she could see well enough with the other eye, she thought it unnecessary, and so continued her occupation. During the last few weeks the sight of the left eye has begun to fail without any inflammation, and a few days since she was compelled to leave her situation.

There is a peculiar vacant expression about the girl's face, which I think is unconsciously assumed, and a slight apparent divergent strabismus due to an unusually large angle (*a*). The ocular tissues are free from any vascularity, the pupils react equally and normally to light, the media are transparent, and the fundus in every respect normal. I could not succeed in entrapping this patient with the use of prisms, because, although she confessed to seeing the light with one eye she could not, she alleged, see well enough to distinguish a lamp flame. Nevertheless, her movements and general demeanour were strangely at variance with the amount of professed blindness. I requested her to follow me upstairs, which she did, touching the various objects in the passage after the manner I have previously described as peculiar to these patients. I asked her to lie down on the couch in order that I might more easily put some drops in her eye. Some objects lying on the couch she removed without my asking her to do so and put them on to an adjoining chair, and in many little ways it was obvious to a careful observer accustomed to deal with blind persons that her professions must, to say the least, be very grossly exaggerated. Throughout the whole examination she was very cheerful, and seemed rather pleased than otherwise with herself. After having explained to her distressed parents the nature of the case, I made them promise to watch the girl closely, but not to treat her harshly, and I prescribed some of the abominable concoctions of valerian and assafœtida, which are supposed to have some specific effect upon hysterical females, and which, if sufficiently frequently administered, must make life anything but a "bed of roses."

In a few days she was brought back to me. She said she was now much worse. The medicine she thought did her no good. She was quite blind. The little glimmer she had had left her, and all was Cimmerean darkness. I took her to a large open window through which the midday sun was shining brightly. To her it was as dark as night.

After a little conversation, I said I thought a little account of her case would be highly interesting, and that young ladies frequently jotted down for me short histories of their maladies, which were transferred to my note-book. She thought she could, and, being provided with pens, ink, and paper, I left her. In a few minutes, when I returned, she was writing. I had not told her the position of the inkpot or pen. She dipped the pen in boldly and without hesitation. Her writing was regular in the distance between the lines and the intervals between the words, and stops were placed at the proper places. Emboldened by the success of this manœuvre, I tried to catch her. I commenced reading the paper over in a low, almost inaudible tone. Suddenly I stopped, and, putting the paper before her, said, "What on earth is that word?" She looked at it. "That word?" she said. Then, raising her eyes, with a faint smile, she said, "You know I am blind; how can I read what I have written?" I felt now the time was come for speaking seriously to the patient, and explained to her the utter impossibility of anyone who was as blind as she pretended to be doing the things she did. She replied, as usual, with a flood of tears, but maintained stoutly her position. I now tried the continuous current from five cells of a Leclanché battery. She averred that she got no luminous impressions, even when the current was suddenly reversed and the shock was considerable, but I could see she did not like the battery, so I told her it would have to be used daily. After our consultation was over I watched narrowly her departure. She went downstairs by herself, passed along the passage to the front door, carefully avoiding obstacles that had purposely been put in the way, and mounted the back of a high dog-cart without a moment's hesitation or fumbling.

In two days the girl returned, her face radiant all over. Sight had begun to return to one eye, and she could see a little bit for a few minutes at a time. She thought it would soon return permanently, but at present it only came periodically. Further questioning revealed the curious fact that it was usually at the most convenient hours that it returned—generally at meal-times! She could never see in church, and so she was never taken.

It is perhaps needless to go into any further particulars concerning this curious case. Suffice it to say that from this period her sight commenced to improve, and at the end of two months she acknowledged to being perfectly cured, and finally returned to work as a useful member of society.

I think all will admit that these two cases present features of peculiar interest. As I before said, I think they must not be looked upon as cases of malingering pure and simple. In both cases there was complete absence of what the law would call motive. Neither of these girls was unhappy or wished to leave her situation, or was in any way bettered by her change of life. The old Biblical expression of "possessed of a devil" would fairly well express the condition. Their own will being in abeyance, they become a prey to all kinds of extraneous influences, and mimic those maladies which have made the greatest previous impressions on their mind. Perhaps the nature of the malady they simulate may sometimes be determined by an amount of real mischief or disturbance in the organs affected, and this I am inclined to think is often the case. I am of opinion that in both these cases there was some substratum of amblyopia, or perhaps some temporary deficiency either of the central or peripheral field, but the impossibility of getting the patients to give you anything like proper and satisfactory answers renders any investigation impossible, or altogether unreliable.

Newcastle-on-Tyne.

ST. THOMAS'S HOSPITAL, WINTER SESSION, 1888-9. The Mead Medal for Practical Medicine has been awarded to Mr. S. G. Toller; the Cheselden Medal for Surgery and Surgical Anatomy to Mr. A. C. Lankester; and the Treasurer's Gold Medal for General Proficiency to Mr. A. F. Stabb. The following prizes have been awarded:—Third Year Students: J. J. Perkins, College prize, £20; W. H. Millar, College prize, £15; A. King, College prize, £10; C. P. Lovell, second tenure of Peacock Scholarship. Second Year Students: J. H. Fisher, the Musgrove Scholarship of £38 10s.; C. S. Wallace, College prize of £20; W. B. Winston, College prize of £10. First Year Students: Edwin Smith, the William Tite Scholarship of £27 10s.; W. G. Sutcliffe, College prize of £20; C. Planck, College prize of £10.

TWO CASES OF

TRANSVERSE SEPTUM IN THE VAGINA;

WITH REMARKS.

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THE condition met with in the two cases here recorded is of considerable rarity, and when, as in one of the cases, it is first discovered during labour, it is apt to prove very puzzling to the medical attendant. The abnormality is clearly congenital, but it is, I believe, not yet known to what special fault of development it owes its origin. The case is otherwise with the longitudinal septum, a much more common malformation, which, like the septate uterus, results from the two Müllerian ducts failing to become fused into a single canal by the absorption of their adjacent walls.

CASE 1. *Transverse septum in the upper part of the vagina; sterility; cervical catarrh.* (From notes by H. G. Turney, M.B.)—Mary A. P——, aged thirty-eight, a widow, residing at Walton-on-Thames, was admitted into Adelaide ward, St. Thomas's Hospital, on June 6th, 1888, complaining of an offensive discharge from the vagina. She had a delicate childhood, but since puberty her health has been good. When about the age of twelve she had some kind of inflammation of the genital organs, for which she was ordered a cold lotion over the vulva. The catamenia appeared at fourteen, and have been regular ever since. The flow is preceded by pain. Occasionally there has been a dark-brown discharge in the intervals. The patient was married seven years ago, and has been a widow sixteen months. She has not been pregnant. She is not aware of there having been any difficulty or inconvenience in her marital relations. In March, 1888, she began to lose her appetite, and to feel languid and weak. The dark intermenstrual discharge became offensive and nearly constant, except during the night.

On examination the vagina was found of usual width, but only an inch and three-quarters in length. After careful search, there was found in the anterior part of the obstructing membrane, a little to the right of the middle line, an aperture large enough to admit a uterine sound. The sound passed into a cavity that appeared to consist of the upper part of the vagina; it moved freely in every direction. The septum was thin and flexible, no cicatricial tissue being discoverable in any part of it. Bimanually, the uterus could be felt of normal size and position, the cervix projecting naturally into the upper part of the vagina, above the septum. With one finger in the rectum the outline of the uterus could be defined still more readily on bimanual palpation.

On June 26th a dilating uterine forceps (Lloyd Roberts') was passed into and through the opening in the septum, the blades being separated first antero-posteriorly, then laterally, until the forefinger could be passed and the upper part of the vagina explored. It was found quite natural and of ample size, the cervix uteri projecting into it normally. The enlargement of the opening caused no pain or hæmorrhage. Further stretching was accomplished with the fingers until the septum could no longer be felt except as a delicate roll of membrane attached all round to the vaginal wall. A tubular speculum was now passed, and the os uteri was seen to be surrounded by a bright-red areola of granular or papillary erosion. The length and direction of the uterine cavity were found to be normal. A glass vaginal dilator, loosely packed with iodoform gauze, was inserted, and kept *in situ* by a T bandage. The manipulations were conducted without anæsthesia, and with hands and instruments well rinsed in a solution of corrosive sublimate (1 in 1000).

June 29th.—The patient has been comfortable and free from pyrexia. The glass plug was removed to-day. A ridge can be felt along what was the circumference of the septum; and on the left side a little corner of the septum, one-eighth of an inch wide by half an inch long, still remains.

July 3rd.—The erosion is diminishing in size. There is no tendency to contraction of the vagina. The only remains of the septum are as already described.

The patient was discharged well on July 12th. Two months later she presented herself for examination. The

erosion had disappeared, and the vagina was, except for a little ridge on its walls, perfectly normal.

CASE 2. *Transverse septum of the vagina obstructing delivery.* (From notes by Mr. E. D. Y. Pode, Clinical Clerk.)—Louisa W——, aged twenty-three, was admitted into Adelaide ward, St. Thomas's Hospital, at 12.30 P.M., Feb. 13th, 1889. She had been in labour for about twenty-four hours, and the pains were now frequent and severe, and expulsive in their character. She was brought to the hospital by her medical attendant on account of his being unable to discover either the mouth or neck of the womb, or, indeed, an opening of any kind in the vaginal roof, although he could distinctly feel the head of the child beyond it. The history, as obtained partly on the patient's admission and partly at a later period, was briefly as follows. The catamenia commenced at the age of twelve, and continued regularly every twenty-eight days up to two months after her marriage in April last. There was habitually a slight discharge between the periods, but without ill odour. For the last three years there had been excessive pain during the first day of the flow. On Feb. 9th (her confinement being expected on March 24th) she fell on her back from a sewing-machine, upon which she was standing to clean a window. She became faint, and went to bed for an hour or two. The following day she felt nervous and shaken, but otherwise well. At 3.30 A.M. on the 12th she awoke in severe pain, and at noon on that day a slight dark-coloured discharge took place. Her doctor first saw her at 2.30 P.M. At 9.30 the following morning he decided, after consultation with a friend, to send her to the hospital.

Shortly after her arrival the patient was placed under ether and the septum carefully explored. A little behind its centre was detected a small nodule, and by the side of the nodule an opening not larger than the orifice of the urethra. Placing the top of the forefinger over this opening, the septum was pressed upwards and made tense, with the result that the aperture enlarged sufficiently to allow the finger to pass through into the upper part of the vagina. First by further dilatation and then by careful tearing, the septum was completely divided with the fingers, and then the protruding bag of membranes could be both seen and felt. The os uteri being fully dilated, a sublimate douche (1 in 3000) was administered, the membranes were ruptured, and delivery was easily effected by means of the axis-traction forceps. After waiting some time, the placenta was removed by the introduction of one hand within the uterus, the other hand controlling the fundus. There was no unusual amount of hæmorrhage at any stage of the delivery. The child was premature and feeble, and survived its birth but twelve hours. After labour was over, the vagina was again douched with the sublimate solution.

Convalescence proceeded normally, except for a transient rise of temperature on Feb. 16th (fourth day) and again on the 22nd (tenth day); on the former occasion to 100·4°, and on the latter to 102°. The patient was discharged well on March 6th. The uterus was then normal in position and mobility; its canal measured three inches. The vagina measured only two inches from the orifice to the os uteri, which represented the highest point of the vaginal roof, both anterior and posterior fornices being obliterated. The only remains of the septum traceable was a ridge running horizontally along a portion of the anterior vaginal wall.

Little has been added to our knowledge of these transverse vagina septa since Delaunay[1] published his valuable monograph on the subject in 1877. Single cases have, however, been recorded by Isaac E. Taylor,[2] Heywood Smith,[3] Percy Boulton,[4] Gervis,[5] and Fancourt Barnes.[6] Most of these writers have designated the condition imperforate vagina, or atresia vaginæ. Following the example of Delaunay, I have preferred to speak of it as transverse septum in the vagina. Speaking of the more recent cases, in only two has the observer failed to detect an opening, and in both of these not only had menstruation occurred regularly, but pregnancy had taken place. It therefore seems highly probable that an opening either existed or had existed. In five of these cases (including my own) the openings were exceedingly small, barely admitting a blunt probe, and in two no opening was discovered until the septum was put on the stretch. In all the seven cases it is stated that menstruation was regular. But what is still more remarkable is the fact of pregnancy having occurred in no fewer than three of them—a circumstance that strikingly exemplifies the enterprising character of spermatozoa. As a rule the septum is situated an inch and a half or two inches above the vaginal orifice, and consists of a thin, not very vascular, and easily lacerable membrane. In Dr. Fancourt Barnes's case, however, the septum is described as "of at least two inches in thickness," and "traversed by a canal of the same diameter as that of the pin-hole orifice." As in many other forms of vaginal abnormality, the urethra is often found much larger than usual. The treatment of the condition is, first, to dilate any existing opening, and then to carefully tear through the septum, or, if this be impossible, to divide it with a knife.

Brook-street, W.

[1] Etude sur le Cloisonnement Transversal du Vagin, complet et incomplet, d'Origine Congénitale. 130 pp. 8vo. Paris, 1877. (Contains details of the sixty-eight cases, and a good bibliography up to date of publication.)

[2] Atresia of the Vagina, Congenital or Accidental, in the Pregnant or Non-pregnant Female. Trans. Amer. Gynecological Society, vol. iv., for 1879. Boston, 1880. Page 404.

[3] A Case of Delivery through an Imperforate Vagina. Trans. Obst. Soc. Lond., vol. xxiii., for 1881. London, 1882. Page 117.

[4] A Case of Imperforate Vagina. Trans. Obst. Soc. Lond., for 1881. London, 1882. Page 125.

[5] Case of Transverse Septum in the Vagina. Trans. Obst. Soc. Lond., vol. xxiv., for 1882. London, 1883. Page 210.

[6] A Case of Labour with Atresia Vaginæ. Trans. Obst. Soc. Lond., vol. xxv., for 1883. London, 1884. Page 99.

THE HEARING OF SEAMEN.

BY FRANCIS E. CANE, L.R.C.P. & L.R.C.S. EDIN.

THE attention of the medical profession has frequently been directed to colour and vision tests for seamen, but the subject of testing their hearing has so far remained unnoticed. In these days of fast and prospective faster steamships the matter of correct hearing is becoming ever of more vital importance. Our steamers frequently encounter fog for hours, days, and even weeks; but the only means of making their approach mutually known is by some device affecting the sense of hearing. The method of fog signalling at present suggested by the Board of Trade, and employed by steamships, is sounding a prolonged blast with a loud whistle every two minutes. These whistles have not been standardised. This system of signalling has the grave disadvantage of giving no information as to the course followed, or what either vessel intends to do in order to avoid the other. Navigators are alive to the shortcomings of the present plan, and many suggestions have been made. Captain J. Campbell, in the July (1888) number of the *Mercantile Marine Service Association Reporter*, suggests an ingenious and simple code for fog signals at sea, based on the use of shrill and bass whistles. He divides the compass into eight inclusive courses or octants, and has for each a different arrangement of the high and low sounds, never exceeding three blasts, to act as a permanent signal indicative of the course followed, a single long-continuous bass or shrill whistle denoting respectively that the course is directed to port or starboard. This system could easily be committed to memory by any sailor intelligent enough to box the compass, and would offer far less difficulty to the mind than learning the ropes or the simplest telegraphic code. It would supply information as to whether the other vessel was pursuing a similar, opposite, or cross course, and what the vessel was doing with her helm. From all this may be learned how dependent seamen are on their sense of hearing in foggy weather. But while the Board of Trade and certain leading steamship companies adopt tests for vision and colour-blindness, there has hitherto been no suggestion or thought of tests for that sense on which so much depends in the most dangerous of positions.

Sailors are particularly liable to acute and subacute ailments of the ear, but there are no proper statistics on the subject. My own experience leads me to think that much information might be obtained by systematic collective investigation, not only afloat, but at the various seamen's hospitals and dispensaries on shore. Not alone is it important that masters, mates, and men should be examined and tested for healthy hearing, but they should be acquainted with the extent to which they can trust their hearing. This is shown in the mistake made by a writer of some authority in seamanship when dealing with the subject

of fog-signal codes in the September (1888) number of the nautical magazine already quoted from. He says that it is not necessary to denote the course taken if the signals indicate what is being done with the helm, and then he goes on to say: "If I am steering through a dense fog and hear a whistle ahead or on the port bow, I at once put my helm hard-a-port and blow one blast. If I hear a whistle on my starboard, I put my helm hard-a-starboard and blow two blasts." Here the writer asserts that the direction from which a sound comes can readily be made out so as to justify immediate action. A similar statement is made in an article on fast steamships in the June (1888) number of the *North American Review*. So far from this being the case, we know from experience, physiology, and acoustics, popularly exemplified in ventriloquism, that the direction from which sounds proceed is difficult to ascertain. The difficulty is increased in fog and darkness, when hearing loses the assistance of other senses and has no previous knowledge of the position of the sound's source. It does not take much knowledge of acoustics to know that density of fog, layers of varying density in the atmosphere, direction of wind, echo or reflexion of sound from sails, masts, and funnels, together with a host of intricate external influences, all combine to change the direction of the transmitted sound. But if these difficulties are present with the normal ear, how much more likely if the officers or seamen are dazed from want of sufficient sleep or from long hours of nervous tension through continued anxious watching. Suddenly aroused from insufficient sleep, seamen come from a warm cabin to the cold deck or bridge, where they are for many hours exposed to all weathers, often in damp clothing. This long list of difficulties takes on its most serious aspect when we come to study the pathological conditions likely to prevail. We may find wax, growths, or foreign bodies in one or both ears, giving inequality of hearing. We may find otitis, otorrhœa, thickened membranes, Eustachian difficulties, syphilitic or other disease of the bones, affections or diseases of the nerves, or, in fact, deafness or defects in hearing on one or both sides from any cause whatever.

Very much more might be written on the hearing of seamen, but the aim of this paper is to direct attention to the subject on lines capable of being enlarged, to suggest further investigation, and to show that only men of normal hearing and a proper understanding of their power, should be entrusted with lives and property, which might often depend on the sense of hearing alone for safety in the most dangerous of all the perils encountered at sea.

Liverpool.

TWO CASES OF ACUTE LEAD POISONING DUE TO HOME-MADE WINE.

BY GEO. H. ALLDEN, M.B.

CASE 1.—A married woman, aged about thirty-five years, the wife of a farm labourer, living in a semi-detached cottage about seven miles from Southampton, sent for me in the autumn of 1885, and said that she had miscarried at about three months four days previously, that the pains had not subsided but had become worse, and that for the last three days she could keep nothing down, but had brought up continually large quantities of bile. She stated that she had been attended by a doctor for the last week, and, as she got no better, had told him she should call in someone else. On questioning the woman, I found that the bowels had not been relieved for nearly a week, and that there had been little or no discharge since the miscarriage. There was no great tenderness on palpation over the abdomen, which was retracted; temperature subnormal, 98°; pulse thready and slow, 68 per minute. There was a pan by her side containing nearly a gallon of green bile, which she had vomited at intervals during the past twenty-four hours. She had the cachectic appearance of saturnia, and a blue line on the gums at the junction with the teeth. Her husband worked with horses on the farm; she did housework only; but, on examining the gums of her husband, I found the same blue line. In no way could I ascertain that either had been exposed to lead from paint or otherwise. The cooking utensils were free from verdigris or solder, the well water which supplied both cottages gave no trace of lead on analysis, and the only doubtful article of diet was some home-made red-currant wine which they had first broached some ten days previously. The wine, I ascertained, was made in a large earthenware pan, highly glazed inside, and on testing the wine considerable quantities of lead were found. The woman made a good recovery after the bowels had been well relieved by enemata and purges. The husband had an acute attack of colic with vomiting two days after my first seeing him, which quickly subsided under the foregoing remedies.

CASE 2.—A farm labourer living at Wyfold, six miles from Henley-on-Thames, sent for me on Dec. 30th, 1888, for what appeared to be a sharp bilious attack. He was vomiting a great deal of green bile, and complained of severe colic. His temperature was normal. The vomiting was soon relieved by a calomel purge followed by an alkaline mixture, and he resumed work in a day or two, though still complaining of occasional abdominal pain. On Jan. 17th, 1889, I was again sent for, and found that the bilious vomiting and colic had returned with great severity, and that the bowels refused to act in spite of several doses of castor-oil which had been administered. On this occasion a distinct blue line was observed along the margin of the gums at their junction with the teeth, and, on examining the gums of his wife, a similar line, though not so marked, was detected in her. The wife, although she complained of headache, and appeared very pale and cachectic, had no other symptom of plumbism. No trace of lead could be found in their drinking-water, and neither of them in their occupations came in contact with lead or paint; but, on inquiry, I found that on various occasions, and notably about two or three days before his attacks of vomiting and colic, the husband had taken nearly a pint of a dark-coloured cherry wine, which had been made, as in the previous case, in a glazed earthenware vessel. His severe symptoms persisted on the last occasion for several days, accompanied by great prostration and low muttering delirium; and the constipation was not relieved till after repeated enemata and frequent doses of a mixture containing sulphate of magnesia, dilute sulphuric acid, and tincture of belladonna. The following are the results of tests applied to the cherry wine:—Sp. gr. 1040; reaction very acid. From twenty ounces of wine, sulphuric acid threw down a dull-white precipitate, which, when well washed and dried, weighed twenty grains. This precipitate was readily soluble in an ammoniated solution of tartaric acid, insoluble in hydrochloric, nitric, acetic, phosphoric, and sulphuric acids. With iodide of potash the precipitate immediately gave the brilliant yellow colour of iodide of lead. It therefore follows that four gallons and a half of this wine would yield nearly an ounce and a half of the sulphate of lead.

I have reason to believe that this cause of lead poisoning is by no means rare amongst the poor and thrifty in those counties where fruit is plentiful; and to obviate this danger the manufacturers of these pans with litharge glazing should be compelled to insert a permanent legible caution inside the vessel against its use for fluids containing those acids likely to dissolve out the lead.

Henley-on-Thames.

PHENOL IN ENTERIC FEVER.[1]

BY FRANK M. POPE, M.B. CANTAB., M.R.C.P.,
PHYSICIAN TO THE LEICESTER INFIRMARY AND FEVER HOUSE.

AT the present time, when every week, almost every day, brings its new drug, each in turn praised as being the greatest discovery of modern therapeutics, it is of importance that any facts which contradict already published opinions on the action of any drug should be as widely circulated as the original statements.

In a paper published in THE LANCET of June 22nd, 1888, Dr. F. S. Gramshaw reported having treated 116 cases of enteric fever with phenol combined with tincture of iodine, without a single death. He stated that he was led to employ it from the account by Dr. Rothe in the *Deutsch. Med. Wochensch.* for 1880, and ascribes to it the power of lowering the temperature and of exercising a beneficial effect on the ulcerated patches in the intestine. Dr. Gramshaw recommends the following to be taken every four

[1] Read before the Leicester Medical Society

hours: Phenol, 1 gr.; tincture of iodine, 1½ gr. He says that the patient becomes more comfortable after its administration, and that the disease runs a mild course, free from complications. It may be remarked here that in the cases which Dr. Gramshaw quotes at length, in which the temperature certainly appears to have fallen after the phenol was given, it was commenced about the beginning of either the third or fourth week, periods when defervescence not unfrequently commences under the expectant or other treatments.

These results appeared remarkable, more especially as it seems the almost unanimous opinion of the recognised authorities on enteric fever that while hygienic and dietetic measures, combined with good and careful nursing, have the most favourable influence on the disease, yet that treatment by drugs has little or no effect on the percentage mortality of any epidemic. As phenol is a powerful germicide, and also, as might be expected from its affinities with resorcin and salicylic acid, and more remotely with antipyrin, has some antipyretic properties, I resolved to try it, and commenced its use in July last, and, finding it to have at any rate no bad effects, continued to prescribe it in every case under my care till November, when I became convinced of its inutility. The cases were all in the wards of the Fever House attached to the Leicester Infirmary, and were under most favourable conditions with regard to air space, sanitation, and especially nursing. Phenol was given in twenty-two cases; twenty, or 90 per cent., were under twenty years; seven of these, or 30 per cent., under ten years. Thus a large proportion were of the ages at which as a rule the disease runs a comparatively mild course. The drugs were given in the doses recommended above. It was well borne, and was not unpleasant. The urine in all cases had a greenish tinge, but no hæmaturia was produced. The only effect that was perceived was that in some cases the morning temperature was lower (0·4°—0·6° F.) in proportion to that of the evening than was the case in patients who were not taking the phenol.

Two patients died, one from bronchitis and probably pneumonia, the other from perforation and consequent peritonitis. Besides these, three had relapses. The average stay in hospital of those that recovered was forty-eight days. The average time from the onset of the disease till the temperature had regained the normal and remained there was thirty days. Anyone familiar with enteric fever can judge from this whether the drug appreciably shortened the course of the fever. The fetor of the stools was entirely unaffected. Considering these cases with those in the institution during 1887, at the beginning of the same outbreak, the following table speaks for itself:—

	No. of cases.	Died.	Percentage of deaths.	Relapses.	Percentage of relapses.
Treated by phenol	22	2	9·1	3	14·1
Not so treated	120	11	9·1	17	13·6

With reference to the large number of relapses, it should be stated that they have been observed to be unusually frequent during the last two years, not only at the Fever House, but generally in this district, and evidently the phenol did not affect the disease in this respect. As a result of the above facts, I have formed the opinion that phenol combined with iodine in the above doses has but slight effect on the temperature, and none on the percentage mortality, complications, or general course of enteric fever.

Leicester.

NORTH DEVON INFIRMARY.—A special Court of the Governors was held at Barnstaple, on the 26th ult., for the purpose of receiving the resignation of Mr. C. E. R. Pronger, a member of the medical staff, who was about to leave the town. Dr. Budd presided. The chairman said the question was whether they would decide to elect an officer in the place of Mr. Pronger. He had long thought that the circumstances under which they were placed were changed so materially, there being several hospitals in the surrounding towns, that they did not want so large a staff as formerly; that two surgeons were quite enough to look after the in-patients, and it would be a great improvement to elect two assistant surgeons to attend the out-patients. It appeared that the vacancy caused by the death of Mr. Henry Jackson, a medical officer, had not been filled. Considerable discussion ensued, which resulted in a decision to fill the two vacancies only, and the election was fixed for that day month.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON ENDOSCOPY IN TUMOURS OF THE BLADDER.

BY F. A. SOUTHAM, F.R.C.S. ENG.,
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HAVING recently made use of the electric endoscope (Leiter's) in several cases, I can confirm what Mr. Hurry Fenwick said in his paper read before the Medical Society of London[1] with regard to the value of this instrument in the diagnosis, as well as in the treatment, of tumours of the bladder.

Case 1 was that of a man aged fifty-four, who suffered from hæmaturia, and also from symptoms due to the presence of a malignant stricture (epithelioma) of the rectum. On examining the bladder with the endoscope, an excavated ulcer, the size of a shilling, with a well-defined margin, was seen on the posterior wall, its dark-brown irregular base contrasting very vividly with the smooth, pinkish surface of the surrounding healthy mucous membrane. Close to it was a blackish nodule, the size of a pea, apparently another portion of the growth commencing to sprout into the interior of the bladder.

Case 2 was that of a man aged sixty-three, who for some months had suffered from slight and persistent hæmaturia, vesical in its origin, but without any very definite bladder symptoms. With the endoscope, a blackish, nodular, sessile growth, about the size of a walnut, was at once seen springing from the left side of the trigone and standing out in bold relief against the pink background formed by the healthy mucous membrane. Its surface was uneven and devoid of villosities, but in places small whitish shreds, apparently particles of adherent fibrin, were distinctly visible, floating in the fluid and waving to and fro with every movement of it. From its appearance it resembled a sarcoma rather than a papilloma or epithelioma. To confirm the diagnosis, a small lithotrite was introduced into the bladder and passed down to the spot where the tumour had been seen with the endoscope. The blades of the lithotrite were then turned towards it, and gently opened and closed. On the second attempt, a piece of solid growth, the size of a pea, was brought away with the instrument. Examined microscopically, it was found to be a round-celled sarcoma.

Case 3 was that of a woman aged forty-seven, from whose bladder I had removed a small pedunculated sarcomatous growth sixteen months previously. As she was anxious to know whether there was any probability of the tumour recurring, I examined the bladder with the endoscope. Finding a perfectly healthy condition of the mucous lining throughout, and no indication of any return at the spot whence the tumour had been removed, I was enabled to assure her that she might now consider the cure as permanent.

In none of the cases was any difficulty experienced from the presence of bleeding, although in each the endoscope was retained in the bladder sufficiently long to allow of a thorough examination being made, and in Cases 1 and 2 also to permit a number of students, who were present in the theatre, themselves to obtain ocular evidence of the presence of the growths. In each instance the examination was made under anæsthesia. In Case 1 an intra-vesical injection of cocaine (one drachm of a 20 per cent. solution) was first tried, but the presence of the instrument in the bladder excited such constant spasm that it was impossible to make a satisfactory examination until after the patient had been anæsthetised. Cases 1 and 2 serve to illustrate the value of the endoscope in the early stages of vesical growths, when the symptoms are hardly severe enough or sufficiently well marked to justify digital exploration of the bladder; for, with the exception of hæmaturia, neither patient suffered from urgent or very definite bladder trouble. Case 1 shows how useful the instrument may prove as an aid to treatment, for the recognition of the extension of the disease from the rectum to the bladder was an additional argument in recommending colotomy as a preventive against the suffering and inconvenience which will probably accompany the subsequent formation of a recto-vesical fistula, if

[1] THE LANCET, March 16th, p. 534.

the passage of the fæces is not diverted. Case 2 shows that after the presence and situation of a growth have been ascertained by the endoscope, its nature can be estimated by the simple procedure there adopted—viz., by removal of a small portion of it by means of a lithotrite for microscopical examination. As complete extirpation of the tumour would probably have been impossible (for sarcomata, especially when sessile, usually extend deeply infiltrating the muscular coat), the information gained by the endoscope was an important factor in deciding against operative interference. Case 3 illustrates the value of the instrument as an aid in prognosis.

Manchester.

CASE OF PRIMARY TRIPLE AMPUTATION AT LEFT ELBOW, LEFT FOOT, AND RIGHT LEG; RECOVERY.

By T. W. J. ALLEN,
HONORARY SURGEON TO THE GRIMSBY AND DISTRICT HOSPITAL.

W. E——, a boy aged eight years, was run over by a locomotive engine on May 21st 1888. The right leg, left foot, and left forearm were hopelessly crushed. There were also compound fracture of the second and third metacarpal bones of the right hand, a lacerated contused wound on the forehead about three inches long, and two cuts on the back of the scalp of about an inch each in length, with much bruising of the face. He was brought to the hospital suffering from shock and hæmorrhage, but quite conscious. Assisted by Dr. Damian, the house surgeon, I proceeded to operate, and, chloroform having been administered, rapidly amputated in succession at the left elbow joint and at the upper third of the right leg, and performed a Syme's ampu-

tation of the left foot—Dr. Damian taking charge of each stump, securing vessels, applying sutures, &c., immediately the limbs were separated. The whole operation lasted about thirty minutes. The right hand was cleansed, dressed with iodoform gauze, and put on a splint, and the other injuries dealt with on ordinary principles. The morning after the operation there was great swelling of the eyelids, and very considerable subconjunctival extravasation.

The case was one of uninterrupted recovery. For the first week the effects of shock and hæmorrhage were very marked. The right hand made a good recovery, with the exception of a partial loss of power to extend the middle finger. The patient left the hospital on July 24th, having gained flesh considerably, and being then and at the present time in robust health. (See engraving.)

To account for the nature of the boy's injuries, I suppose he must have fallen with his feet across one metal and his hands partly stretched over the other.

Grimsby.

CAN PNEUMONIA BE CUT SHORT BY ANTIPYRIN?

By H. E. COUNSELL.

MOST people, I should say, are sceptical as to the power of any drug cutting short such a disease as pneumonia, the question naturally arising when such a subject is broached being much the same as suggests itself when "cures for cancer" are mentioned, Was it the disease at all?—and the conviction of the reality of the disease those who have seen it will always have great difficulty in imparting to those who have not; still, I think the following history ought to be almost conclusive.

The patient, aged twenty-one, has had two previous attacks of pneumonia: the first one four years ago; the second last winter—a very severe attack, in which I attended him. On Feb. 25th he went to his work at 5 A.M., feeling perfectly well; at 6 A.M. he commenced to shiver, was then sick, and felt so ill that it was with difficulty he reached home. He then went to bed. At 3 P.M. pain in the left chest and cough came on, and he expectorated some rusty sputa. I saw the patient at 5.30 P.M.; he had then constant short cough, complained of pain in the side, and felt very ill. Temperature 102·6°; respiration 24; pulse 120. On examining his chest, resonance was good in front, with rhonchus under the left nipple. Behind, over the left side, the resonance was high pitched, and from the angle of the scapula downwards there were well-marked fine crepitations. He was ordered fifteen grains of antipyrin at once, and poultices. Next day he told me that after the powder he slept well. The cough and pain became much less troublesome; he still had both, but felt much better. Temperature 98·4°; respiration 18; pulse 70. The condition of the lung was the same as on the previous evening. On Feb. 27th he was much better, and slept well all night. He coughed very little, and had scarcely any pain when he did so. The resonance was the same on both sides of the chest. On taking deep inspiration, crepitations could still be heard over the same area, and loud rhonchus under the angle of the scapula. Temperature normal. On the 28th he was quite well.

Was this a case of pneumonia? Does true pneumonia ever abort without treatment? These questions I leave others to decide, my own feeling upon the matter being that the next time I am called to a pneumonia sufficiently early I shall once more try antipyrin.

Liss, Hants.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF ACUTE INTESTINAL OBSTRUCTION SECONDARY TO PERITONITIS; REMARKS.

(Under the care of Mr. MARCUS BECK and Mr. A. E. BARKER.)

THESE two cases are of interest from the occurrence in both of mechanical obstruction of the small intestine secondary to peritonitis. In Case 1 the peritonitis spread from an abscess around a gangrenous vermiform appendix, and the distended intestine was found strangulated by a band. In Case 2 the peritonitis followed rupture of a caseous iliac gland, and an adherent coil of ileum had become twisted upon itself and mechanically obstructed. Such a complication as obstruction of the intestines secondary to a peritonitis is extremely rare, and most of the points in each case are fully dwelt upon in the remarks. Disease of the appendix is probably the commonest cause of a peritonitis, which may produce a condition of serious obstruction (but this is usually at a later period) from

contraction of adhesions, matting of intestine, or the formation of bands. Pelvic peritonitis in the female acts in a similar manner. It may also follow abdominal operations, such as ovariotomy and the operation for hernia. In the first of these cases, that under the care of Mr. Beck, there was no history pointing to the possible presence of a band, which was probably formed by a rare branch of the superior mesenteric artery. A volvulus of the intestine may be formed as follows: a long loop may be twisted on the mesentery as its axis; there may be a twist in the longitudinal axis; or contiguous coils may be twisted round one another. By far the most common seat of this twist is the sigmoid flexure, and, though it is met with in other parts, such a condition is rare in the small intestine. It is probable that the volvulus in this case resulted from increased and irregular action of the intestine as a result of the peritonitis, which again caused it to become permanent by the adhesions which resulted from the inflammation. For the following account we are indebted to Mr. Johnson, surgical registrar.

CASE 1.—H. C——, a female aged eighteen, was admitted under the care of Mr. Marcus Beck on May 29th, 1887, at 1 A.M. On May 23rd she was quite well. On the 24th she was seized with a sudden severe pain "across the bottom of the stomach" immediately after rising in the morning. She went to work, but in four hours the pain became so severe that she was obliged to return home. The bowels were not open, and there was no vomiting. On the 25th the bowels acted well; the pain was very intense, and she vomited twice. Menstruation then commenced, and the abdomen was slightly swollen. From this day until admission the bowels did not act, she vomited constantly after food, the abdomen became more distended, and the pain was more general. Flatus was passed on the 27th and 28th.

On admission, on the fifth day of the illness, the patient looked very ill. Temperature 99·8°; pulse frequent, small and soft. Tongue red and dry. The vomit consisted of a clear yellowish fluid, not stercoraceous. There was severe pain over the whole of the abdomen, which was uniformly distended and tender. Slight dulness in left flank. No visible peristalsis of coils of small intestine. Examination per rectum and per vaginam revealed nothing abnormal. Morphia was given hypodermically, and small quantities of iced brandy and milk by the mouth. Vomiting continued; the temperature rose to 100·2° and the pulse to 144.

It was decided to perform abdominal section. This was done seventeen hours after admission. A medium four-inch incision was made below the umbilicus. Some clear fluid escaped on opening the peritoneum. The intestines were injected, but no lymph was seen. On introducing the fingers, a band like a piece of whip-cord was felt passing forwards from the back of the abdomen to the anterior abdominal wall below the umbilicus. It was divided between two ligatures, and a coil of intestine at once bulged forward as though previously held back by the band. Some adhesions could be felt between the coils of intestine at the brim of the pelvis. No drainage tube was used. Silk stitches were inserted, and a carbolic gauze dressing applied.

The patient soon rallied. The vomiting continued, she rapidly became more feeble, and died rather suddenly at 9 A.M. on May 30th, fifteen hours after the operation.

Necropsy.—The intestines were injected and distended, and coated in places with lymph. A band like a piece of whip-cord, four inches in length, passed from the mesentery to the abdominal wall two inches below the umbilicus. At the junction of the upper three-fourths with the lower fourth of the small intestine was a sharply marked yellowish line around the gut. The vermiform appendix was gangrenous at its extremity, but not perforated; it was surrounded by a small collection of pus. The other organs were healthy.

Remarks by Mr. BECK.—In this case the sudden pain "across the bottom of the stomach," not sufficiently severe for four hours to prevent the patient attempting to do her ordinary work, followed within twenty-four hours by vomiting, not stercoraceous, with tenderness of the abdomen, distension, and incomplete obstruction, all pointed strongly to peritonitis, either due to perforation of the vermiform appendix, or possibly connected with menstruation, which had commenced on the day after the invasion. It was not until the fifth day of the illness that the obstruction became complete, and even then the vomited matter was not stercoraceous. Strangulation by a band seemed to be excluded with certainty by the comparatively gradual invasion of the symptoms, the absence of complete obstruction for five days, the character of the vomited matter, and the evidence of the presence of peritonitis. The operation was undertaken in the expectation of finding some localised peritonitis, possibly round a collection of pus, either in connexion with the vermiform appendix or the ovary. The incision in the middle line was chosen owing to the uncertainty of the diagnosis. It was therefore with considerable surprise that a band was found distinctly constricting a coil of the small intestine. The constriction was sufficient completely to obstruct the bowel, and would certainly have caused death unless in some way relieved. At the necropsy the lymph was found to be limited to the neighbourhood of the vermiform appendix, and the pus was shut off from the general peritoneal cavity by firm adhesions. It is quite possible, therefore, that had it not been for the strangulation of the intestine by the band the localised collection of pus might have discharged into the intestine, and recovery have taken place. On the other hand, the obstruction of the intestine was evidently due to the tightening of the band by the distension of the intestines following the local peritonitis. This gradual tightening of the band probably explained the aggravation of the symptoms shortly before admission. Microscopic examination of the band showed a distinct lumen, and its course was similar to that of an omphalo-mesenteric artery in a case described by Hyrtl.[1] Its course in the mesentery and abdominal wall was, unfortunately, not dissected.

CASE 2.—E. T. B——, a boy aged fifteen, was admitted under the care of Mr. A. E. Barker on Nov. 16th, 1888, at 1.30 P.M. His previous health had been very good. In the previous August he had an attack of diarrhœa and sickness lasting two days. There was a history of consumption on the mother's side of the family. On Nov. 6th the patient was at work all day, and feeling quite well. He had a light meal at 6 P.M., and at 9.30 P.M. was seized, whilst sitting still, with a sudden "griping" pain across the bottom of the stomach which "doubled him up." The pain continued, and during the night he vomited five or six times, the vomit being frothy and containing food. On the second day he had constant pain in the lower part of the stomach, was sick after everything he took, and there was no action of the bowels or passage of flatus. On the third day the abdomen was slightly swollen, and the swelling steadily increased. On and after the eighth day the vomit was stercoraceous. The obstruction remained complete. Enemata were used without result, except on the tenth day, when a "large black motion" was brought away. The other treatment consisted of spoon diet, opium pills, and the application of hot fomentations to the abdomen. The boy rapidly lost flesh. There was no discharge of blood or mucus from the bowels.

On the eleventh day he was admitted to the hospital. He was thin, and looked very ill. Face flushed. Tongue dry and coated. Temperature 99·6°; pulse 108, of moderate strength. Abdomen uniformly distended; coils of small intestine mapped out; peristalsis visible. Pain chiefly below umbilicus. Slight general tenderness, and shifting dulness in flanks. No increased resistance at any part. Nothing abnormal could be felt per rectum. Urine normal. Heart and lungs normal.

The stercoraceous vomiting continued, and seven hours after admission Mr. Barker opened the abdomen by a four-inch median incision below the umbilicus. The small intestines were injected and distended. On passing the hand towards the right iliac fossa, adhesions between the coils of gut were felt, and it was thought that a distended appendix containing concretions could be detected. A second incision, three inches long, was then made obliquely in the right iliac region. The supposed vermiform appendix was found to be a knuckle of small intestine containing hard fæces. The hand was passed back into the iliac fossa, and some very fetid pus escaped from a cavity lying between a coil of the ileum and the cæcum. Some hard nodules could be felt over the iliac artery. The abscess cavity and the general peritoneum were thoroughly flushed with boiled water at 110° F., carried to all parts by a tube from a raised vessel. The median incision was completely closed, and a drainage tube placed in the middle of the lateral one. A dressing of salicylic wool was applied.

The patient rapidly recovered from the shock of the

[1] See Quain's Anatomy, ninth edition, vol. i., p. 441.

operation, but in seven hours the same severe stercoraceous vomiting returned, and he died collapsed in half an hour.

Necropsy.—The peritoneal cavity contained only a small quantity of blood-stained fluid. A ragged abscess cavity lay between the cæcum and the end of the ileum, the coils of which were adherent by soft lymph. In the wall of the abscess cavity were the remains of a caseous gland, and several chalky glands lay over the iliac artery in the mesentery of the lower ileum. The end of the vermiform appendix lay in the wall of the abscess, and was ulcerated at its tip. Fixed to the brim of the pelvis by firm adhesions beyond the limits of the abscess was a piece of the ileum, at a distance of four feet from the ileo-cæcal valve. At this spot the gut was twisted over in its long axis, forming a volvulus, and was mechanically obstructed. The gut above the twist was congested and distended; that below was collapsed, and bound down across the constricted portion. There was no ulceration or scarring in any part of the intestine. An attempt to release the volvulus post mortem by drawing on the lower portion of gut, which was bound to the brim of the pelvis, resulted in rupture of the adherent part of the bowel without releasing the constriction. The other organs were healthy.

Remarks by Mr. BARKER.—The severity and persistence of the symptoms in this case appeared to point to very complete obstruction of the small intestine; but neither from the history nor from the most careful external examination of the abdomen could much evidence be obtained as to the probable nature of the obstruction. It appeared to me, then, that either an exploratory operation should be done at once before the case became altogether desperate, or that we should make up our minds to trust altogether to expectant treatment. The suddenness of the attack, however, seemed to favour the view that the case might prove to be a volvulus or constriction by a band; and, as neither of these causes could be removed by anything short of an operation, I felt that the latter ought to be undertaken. Through a short exploratory incision, the seat of the disease was made out and its nature partially diagnosed; for though the purulent collection resulted from rupture of a caseating iliac gland, its situation was so close to the vermiform appendix that it was only after careful post-mortem dissection that Mr. Johnson determined that the latter was not at fault. When the lateral incision was made, the pus was only found when the fingers had reached deeply among the intestines, which were adherent by lymph. The latter were separated with caution, so as to spread the inflammatory matter as little as possible; but this separation was not sufficient to release the obstructed coil, which was tied down by and twisted against another coil at the brim of the pelvis. It was found post mortem that to have set free the obstruction would have required an amount of traction on the bowel that would have ruptured it almost certainly, as it gave way when a trial was made after death. If operated on before the adhesions had become so firmly organised, as was the case, the obstruction would probably have been relieved by the traction during the examination of the abscess, and the result might have been different. At all events, the expectant treatment would certainly have failed in this case.

CALCUTTA MEDICAL COLLEGE HOSPITAL.

FIBRO-MYXOMA OF SOFT PALATE AND RIGHT FAUCES; REMOVAL BY EXTERNAL INCISION AND ENUCLEATION; RECOVERY; REMARKS.

(Under the care of Brigade Surgeon K. M'LEOD, M.D.)

PRIMARY new growths of the palate are comparatively rare, and of fibromata few are recorded. Mr. Bryant[1] records a case in which a lobulated fibrous tumour the size of a walnut, of six years' growth, was removed by enucleation after a preliminary tracheotomy. Dr. Semon[2] reports a case of fibroma of the anterior pillar of the fauces. It is said that fibromata usually develop on the upper surface of the palate. Mr. Bryant also records a case of myxoma of the hard palate. Mr. Deakin[3] removed part of the upper jaw for a fibro-myxoma of the posterior part of the hard palate in a youth of eighteen. Tillaux[4] removed an adenoma from the upper surface of the palate; it had existed for at least eleven years. Mr. Hutchinson[5] describes two adenomatous growths removed from the palates of patients aged thirty and fifty; and refers to a large tumour of similar kind[6] which had been removed at St. Thomas's. Mr. Sydney Jones[7] removed an adenoma of the palate from a patient aged thirty-two. It presented those characters referred to by Mr. Hutchinson—slow and painless growth and a tendency to ulcerate deeply in the centre; and it had a distinct limiting capsule. Mr. Treves[8] records three growths removed by him: alveolar sarcoma, spindle-celled sarcoma with melanosis, and adenoid carcinoma. Mr. Stephen Paget has also brought two similar cases before the Pathological Society. Dr. Schmidt reports a case of angio-sarcoma of palate. Dr. Fonnegra[9] describes two cases of encapsulated adeno-carcinoma of innocent nature; the investing mucous membrane was unaffected, and they were easily enucleated. Sir Wm. MacCormac[10] describes a case in which a tumour of carcinomatous character was removed by him from the hard and soft palates. Papilloma is the most common form of tumour, and there are numerous recorded examples. Until 1885 there were only three cases of tumour of the palate recorded in the Pathological Society's Transactions;[11] these were cancer, papilloma, and dermoid. Dr. Magitot[12] records two cysts, each containing an irregularly developed tooth; and Dr. Pilz[13] two cases in which the common carotid was ligatured for hæmorrhage from fungating growths of the palate. When the growth is encapsuled, it is usually possible to enucleate it. A preliminary tracheotomy has been frequently performed, and Mr. Treves ligatured the carotid artery in two of his cases before attempting their removal. We have not met with any account of operation similar to that performed by Dr. M'Leod, his description of which will attract much attention.

W. J——, a slender but healthy Eurasian youth, aged twenty-one, a clerk by occupation, was admitted into the first surgeon's ward on Jan. 15th, 1889, on account of a tumour of the soft palate and right fauces, which he had first noticed ten months previously, and which had been growing rapidly during the last three months. He had great difficulty in talking, breathing, and swallowing.

On admission, it was found that the right palate and fauces were greatly swollen, the uvula being displaced to the left and the faucial aperture greatly contracted. The cause of the swelling was found to be a hard smooth tumour, which lay between the two surfaces of the soft palate and bulged into the pharynx as far down as the tonsil, which was concealed by it. The mucous membrane could be moved over the surface of the growth, which did not seem to be connected to the hard palate, or to the margins of the posterior nares, which could be felt natural and free by introducing the finger behind the tumour. A hardness could be felt externally below the ear, and this became more perceptible when pressure was made on the tumour from within. As the mucous membrane was healthy, uninfiltrated, and unadherent, and the tumour could be felt externally and did not seem to possess any osseous attachment, it was resolved to endeavour to reach it from without and remove it without causing any internal breach of surface.

Operation.—On Jan. 24th a curved incision was made behind the angle of the jaw, and another downwards and outwards from its convexity. The skin and superficial fascia having been divided, the angle of the jaw was reached, and the stylo-maxillary ligament divided by a probe-pointed bistoury. The finger was then carried upwards and inwards along the deep surface of the internal pterygoid muscle. The tumour was soon reached, and found to have passed over the upper border of the superior constrictor of the pharynx. It was enucleated without much difficulty by the finger and handle of the scalpel, and, the wound having been enlarged by cautious cutting and pulling, the lump was "delivered" by means of two lithotomy scoops, one passed above and the other below it. A fibrous band, which probably contained vessels, was tied and divided, the three rays of the stellate wound stitched, and a drainage-tube inserted in the centre. The cavity left by the tumour was a large one, and the hamular and styloid processes could easily be felt and the pulsation of the internal carotid

[1] Surgery, vol. i. p. 612. [2] St. Thomas's Hospital Reports, vol. xiii. [3] Brit. Med. Journal, vol. ii. 1884. [4] Gazette des Hôpitaux, 1885. [5] Trans Path. Soc., vol. xxxvii., p. 490.

[6] This is described as a fibroma in the Statistical Report, 1879. [7] St. Thomas's Hospital Reports, 1866. [8] Trans. Path. Soc., vol. xxxvi., p 490. THE LANCET, vol. ii. 1886, p. 869. [9] Thèse de Paris, 1883. [10] Trans. Path. Soc., vol. xxxvii., p. 485. [11] Birkett, vol. ii.; Wilks, vol. vii.; White, vol. xxii. [12] Gaz. des Hôpitaux, 1884, p. 824. [13] Langenbeck's Archiv, vol. ix.

artery perceived by the finger. The amount of blood lost was trivial, and the mucous membrane of the palate and pharynx escaped injury. The tumour was smooth and hard, externally covered with a distinct capsule, of a flattened ovoid shape, and about the size of an orange or large potato. It cut firmly, seemed to be rather friable, and was of pale colour. It was carefully examined by Dr. T. B. Gibbons, who found it to be a fibro-myxoma.

The patient made a good recovery. He was able to swallow liquids from the first. The tube was withdrawn and the stitches removed on Jan. 24th. On the 26th some accumulation took place in the cavity of the wound, and it became necessary to reinsert the tube. On July 12th the wound had healed, and the swelling of the palate and fauces had completely disappeared. The uvula was central, and the faucial aperture normal. The tonsil had resumed its natural position. He could talk, swallow, and breathe as well as ever. There was no facial paralysis.

Remarks by Dr. M'LEOD.—The rapid growth of the tumour is somewhat inconsistent with its perfect encapsulation and non-malignant character as revealed by physical and microscopical examination, but it may have been there before the patient noticed it. The operation performed was formidable in anticipation, but easy of execution, owing to the absence of adhesions or infiltration. The channel made for the removal of the growth was, as in the previous case, in front of the large vessels and nerves between the facial artery below and the transverse facial branch of the temporal above, and below and behind the internal maxillary artery, while the branches of the pes anserinus lay above the aperture and the hypoglossal nerve below and behind it. No structure of importance was divided or injured,—and the success of the operation was due to a careful previous study of the anatomy of a complicated and dangerous region.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Causation and Pathology of Lateral Spinal Curvature.—Abdominal Nephrectomy.

AN ordinary meeting of this Society was held on April 9th, the President, Sir Edward Sieveking, being in the chair.

Mr. ARBUTHNOT LANE communicated a paper on the Causation and Pathology of the more commonly observed Forms of Lateral Curvature of the Spinal Column, and, in attempting to explain these, the author argued that the large proportion of the cases of lateral curvature which came under the observation of the surgeon were first the fixation and subsequently the exaggeration of a normal and physiological attitude. In the case of the labour curves the attitude, which was fixed and exaggerated, was one of activity, while in scoliosis it was one of rest. He had applied this last principle to explain the causation of many of the deformities of young life as well as many of the changes which developed in feeble old age. He discussed the structure of the vertebral column and the influence exerted upon it by the rotation of the sacrum around a transverse axis, and by the leverage afforded by the several structures connected with it in determining the form of its curves in a vertical antero-posterior plane, and he referred to the manner in which the characters of these curves might be modified in the same plane by labour, symmetrical postures of rest, and by disease of the column itself. In symmetrical flexion of the column, though the fibro-cartilages were rendered more or less wedge-shaped, the thicker portion being directed backwards, yet the whole of the fibro-cartilaginous disc was compressed owing to the resistance afforded by the ligaments connecting the spinous processes. The spinous processes and their connecting ligaments served to limit flexion and extension. Should the attitude of flexion be assumed habitually beyond the physiological or recoverable period, the whole of the fibro-cartilage was diminished in depth, though this was much more marked in front of than behind the transverse axis of rotation. The column was no longer able to resume its normal curves. Supposing the column to be vertical, to consist only of vertebræ and intervening discs of cartilage unconnected to the other portions of the body, and situated upon a horizontally placed sacral facet, if the upper extremity of the column were made to remain in a vertical antero-posterior plane, any lateral inclination of the sacral facet must be followed by a rotation of each body around an antero-posterior axis, so as to form a long single lateral curve. The segment of fibro-cartilage corresponding to the concavity of the curve would be compressed, while that corresponding to its convexity would be elongated, since in the formation of this lateral curve there was no such resistance offered to its development as was afforded in flexion by the spinous processes and connecting ligaments. In such a hypothetical condition the line formed by the apices of the spinous processes would deviate from the middle line to the same extent as that formed by the centres of the bodies of the vertebræ. Should that easy erect posture be assumed in which almost the whole of the weight of the body was supported upon one leg, the sacral facet was inclined considerably to one side, so that we had present at the same time in this attitude a flexion of the column produced by a rotation of the bodies of the vertebræ around a transverse axis and a flexion produced by their rotation around an antero-posterior axis. This resulted practically in the rotation of each body around an axis in a horizontal plane which occupied a position between these, its direction being obliquely forwards and outwards. As a consequence of this, the antero-lateral segment of fibro-cartilage corresponding to the concavities of the two curves was exposed to much pressure, while the opposite segment was placed on the stretch. This condition of the fibro-cartilage, while recoverable as long as the assumption of the attitude was physiological, became permanent when it was too prolonged. Later still, as the deformity became exaggerated, the bones underwent corresponding changes in form. In this case, owing to the oblique direction of the axis of rotation, the spinous processes formed by no means such a marked curve as did the bodies of the vertebræ. Mr. Lane then went on to show that the same combination of transverse and antero-posterior rotation was frequently present in the sedentary attitudes of rest. As he had considered such curvatures as were produced by pleuritic adhesions, contraction of the sterno-mastoid, &c., in previous papers, he did not touch upon them in this.—Mr. W. ADAMS said that Mr. Lane had laid too much stress on the mechanical causes of curvature. He himself had always had a leaning towards the constitutional predisposing causes, some of which were hereditary. There were also the strumous and rachitic diatheses; these furnished the chief causes for all cases under twelve years of age. Between the ages of twelve and sixteen one met with a mixed class, in which heredity and local causes acted in about equal proportion; over the age of sixteen the causes were strictly local. Other theories, such as that of muscular contraction by Guérin and of rotation by Dodd, were still open to discussion. The spine never curved laterally, but the bodies of the vertebræ rotated horizontally. In the lumbar region there was practically no lateral motion, only antero-posterior. As to the pathology of the condition, he was in accord with the author of the paper in every respect.—Mr. BARWELL was afraid that Mr. Lane's paper would tend to produce confusion. The term "rotation" had been hitherto used to denote that motion by which the anterior faces of the bodies of the vertebræ looked towards the convexity of the curve, while the spines looked towards the concavity; its use for any other conditions was to be avoided. In a large number of young cases a simple curve existed from top to bottom of the spine—"scoliosis simplex totalis." The rotation of the sacrum or obliquity of the pelvis did produce to some degree the loin curve, but this was compensated for by the opposite direction of the facet on the inferior surface of the last lumbar vertebra. The normal position of the lumbar spine in the sitting position was a curve with the concavity forwards. In the paper an attempt had been made to account for all lateral curves by the action of the balance, but this could not account for those curves which were primarily dorsal, and which remained confined to the dorsal region till a comparatively late period. Was it so certain that confirmed lateral curvature was incapable of cure? He thought that much improvement could be effected if a pertinent apparatus were applied and muscular action encouraged.—Mr. LANE, in reply, said that he had been able to satisfy himself that these curves were simply the fixation and exaggeration of normal attitudes; in children the attitudes of rest, in adults those of activity. They were, in other words, fixed "resting curves" and "labour curves" respectively.

Mr. KNOWSLEY THORNTON then read a paper on twenty-five cases of Nephrectomy treated by Abdominal Section. The author accompanied the paper by a complete table of the twenty-five cases, showing age, sex, condition, disease, date of operation, situation of incision, method of treating the ureter, whether drained or not, immediate result, and subsequent history to date. Eight of the cases had already been brought before the International Medical Congress in Copenhagen, and these were marked off from the seventeen unpublished cases in the table, and but briefly if at all referred to in the context. Of one of them (No. 6) which was reported a failure in 1884, with pain in the bladder and the other kidney, a very satisfactory subsequent history was now given, the patient being in perfect health, married, and mother of a son. There were twenty recoveries, and five deaths in the series, a result 20 per cent better than that generally given for all nephrectomies, including those by lumbar section. This result was compared with that in ovariotomy eleven years ago, the mortality being then much higher for this comparatively simple operation. Two of the fatal cases were pointed to as not properly to be counted against abdominal nephrectomy, one being a malignant tumour which had perforated the right pleura, and the other having died of hemiplegia, which was brought on by the anæsthesia rather than by the operation. All the features of special interest in both the successful and fatal cases were touched upon. The superiority of nephrectomy over nephrotomy and drainage for the cure of hydronephrosis was illustrated by six cases. Incision of suppurating kidney as a preliminary to nephrectomy was condemned. The author's practice of pinning out the ureter had led to no troubles, and was claimed as the chief factor in success. The removal of suppurating kidneys without any puncture during operation was strongly advocated whenever their size admitted it. The superiority of Langenbüch's incision was insisted upon. The question of drainage was fully discussed, and that of the differential diagnosis in sarcoma of the capsule and of the kidney touched upon. A question was raised as to the varieties of tubercular (so-called scrofulous) kidney. And the paper concluded with a promise of records of lumbar and abdominal nephrotomies and nephrolithotomies in which the mortality was considerably lower than in nephrectomy. Either figures or actual specimens were shown of many of the cases.—Mr. CLEMENT LUCAS said that Mr. Thornton had shown a low mortality, but the mere bulk of cases recorded was no criterion at all of the success of the operation. He himself had some six or seven unpublished cases of the lumbar operation, and had not at present had a death. A great point was to ascertain that the other kidney was healthy, and if the amount of urea secreted was less than half the normal quantity, then the operation must of necessity be a very serious one. He had not as yet performed nephrectomy for kidney disease, but he had twice explored such cases, and in doing so had come upon enlarged lumbar glands, and had therefore abandoned the operation. In kidneys with hydronephrosis he was sure that nephrectomy was right and nephrotomy wrong; if the kidney refilled after one aspiration, then the organ should be removed, and in hydronephrosis the condition of the other kidney could almost with certainty be determined. He could not agree that it was advisable to remove suppurating kidneys through the peritoneum, as, if ever so small a quantity of pus escaped, it gave rise to great danger; they could be most successfully drained or removed through the loin. The ureter had never given him the least trouble, and he had not once regretted dropping it back after simple ligature.—Mr. THORNTON replied that, after all, the great point was undoubtedly experience, and he simply desired to place abdominal nephrectomy on its proper footing. It was only when a large number of cases was taken that the proper mortality of the operation could be found, for his first eleven cases were without a death. In one case he had operated, although he knew that the opposite kidney was not perfectly sound. Sometimes an aseptic operation would do less harm than leaving in the body a large diseased organ. As to the danger of fouling the peritoneum with urinous pus, if the sponges were properly managed the serous membrane ought not to be seen at all. Should any pus escape, he at once sponged it out with corrosive sublimate (1 in 1000), and had not seen harm follow it. Pinning out the ureter, though not a necessity, he thought would prove a measure of safety even in lumbar nephrectomy.

MEDICAL SOCIETY OF LONDON.

Tropical Diarrhœa.—Syphilitic Fever resembling Tertian Ague.

AN ordinary meeting of the Society was held on April 1st, the President, Dr. C. Theodore Williams, being in the chair.

Dr. ROUTH proposed a vote of condolence with Dr. Williams and his family on the loss they had sustained in the death of Dr. C. J. B. Williams; this was seconded by Sir JOSEPH FAYRER, and both mover and seconder feelingly alluded to the personal and professional character of the deceased.

Sir JOSEPH FAYRER then read a paper on a peculiar form of Diarrhœa which derived its origin from tropical and subtropical countries, notably India, China, Ceylon, and Java, and which was of frequent occurrence in Europe, wherever old residents of tropical climates resorted. Its symptomatology, etiology, and as much of its pathology as had been ascertained were described, and the author hoped to show that, though long regarded as a dangerous and even a fatal complaint, it was amenable to treatment if properly and vigorously dealt with. This "white flux"—which had various synonyms—though not always directly related to any well-marked form of climatic or malarial disease, was very insidious in its onset and progress, and very intractable if not early controlled. It was something more than ordinary chronic diarrhœa, though it often supervened on that disease. In it the worst symptoms were often manifested, and a dangerous and protracted state of disease established, and it owed its fatality, when continued beyond a certain stage, to irreparable degeneration of the intestinal mucous membrane and glands, and the consequent inability to absorb nourishment. Death was due to anæmia and exhaustion from slow inanition, the channels for the admission of nutrient material being practically interrupted or destroyed. Many of the examples which came under the author's observation during residence in India were of the variety known as hill diarrhœa, from its proneness to affect dwellers in hill stations, especially those who had been subjected to the debilitating influences of the plains, atmospheric changes, vicissitudes of temperature, greater altitude, and possibly the water, being concerned in its causation. This hill diarrhœa and the "white flux" of other parts of India might be regarded as identical, while in some cases it was associated with, or might merge into, forms of chronic dysentery. The author considered that it must be regarded as a climatic disease, though its etiological relations with malaria seemed to be remote rather than direct. Though sometimes the sequel of other climatic disease, it might begin spontaneously, and often affected, after their return to Europe, people who had not suffered from the diseases of the country they had left, though their health generally must have been enfeebled by climatic influences. There was also a form of intermittent and irregular diarrhœa, prone to attack people who returned from India with hepatic and splenic derangement, which, though it might be the precursor of "white flux," was not of so dangerous a character, and from which recovery was often so rapid as to show that it was due rather to functional disorder than to structural degeneration of the intestine. Such forms of bowel complaint generally did well after the portal system had been relieved by the aid of saline laxatives, with due attention to diet, warmth, and other hygienic conditions of life. This disease often began with simple looseness of the bowels, with little or no pain, the action producing a sense of relief. The excreta at first were natural and bilious, but gradually became light-coloured, frothy, and copious; the patient at first felt no inconvenience beyond that of frequent calls to stool and tenderness of tongue, and it was not till he found that he was losing flesh, strength, and energy that he began to appreciate the serious nature of the complaint. As the disease advanced, the wasting increased; and though the patient might still retain a good appetite, its gratification was interfered with through the tenderness of the denuded mouth and tongue. The appearance of the dejecta, which was suggestive of deficiency of bile, and the passage of the débris of muscular and vegetable tissue through the tube might be ascribed to general causes rather than to any specific disease of the liver. In certain cases diarrhœa was not a constant or prominent symptom; the most characteristic were soreness of the mouth and tongue, the loss of epithelium, the de-

generation of the intestinal mucous surfaces, and continued wasting. The entire absence of bilious colouring in the excreta and of bile pigment in the urine and skin was remarkable; but though this condition might continue for months, normal colouration returned with health, and there was no evidence of liver complication beyond the shrinking which it shared with other organs, but which disappeared as recovery advanced. The signs of the disease were anæmia and emaciation; a dry flaccid and flabby skin, which later on became discoloured, as in Addison's disease. Fat disappeared, the eyes were pearly and sunken, the lips and conjunctiva blanched, the tongue was smooth, red, and glazed, and so tender as to be intolerant of wine, salt, or anything pungent; the papillæ were obliterated, and in advanced stages the organ was shrunken and contracted; its condition was significant of the stage and progress of the disease. The lips, tongue, and mucous membrane were sometimes the seat of painful aphthous ulceration and fissures, and in extreme cases a thick coating of epithelial scales sometimes loaded the tongue and buccal mucous membrane. There might be also evidence of malarial action in the recurrence of fever or other vague condition of malaise; while dyspepsia, with flatulent distension of the bowel and general languor, and debility steadily increased. These symptoms might for a time be mitigated by treatment, but the disease might still be progressing, and should change of climate not prove effective, they went on increasing in gravity; the temperature became subnormal, the urine albuminous, the extremities œdematous, anæmia was profound, and the white, copious, and frothy evacuations were sometimes tinged with blood or mucus, and if this evil condition were not arrested fatal exhaustion soon closed the scene. Post-mortem examination showed that the wasting which was so marked an indication of the disease in life had extended to the viscera. After death, at an early period (from some other cause), the intestines had been found contracted, with the mucous lining thickened, congested, and ulcerated; but after death, at a later period, the coats of the bowel were found to be attenuated and diaphanous, the seat of fatty or lardaceous degeneration, with not unfrequently ulceration of the ileum or colon. The intestinal and mesenteric glands were atrophied and degenerated, the latter, however, sometimes enlarged; the mesentery and liver wasted; the kidney and spleen sometimes in a similar condition. The liver or spleen might be enlarged, but that was not generally the case. The mucous membrane and follicles were found blanched and attenuated, while E. Goodeve and the author had both pointed out that they might be in a state of amyloid degeneration. No reference was made to bacteria or other micro-organisms in reference to this disease, on the ground that it would be premature to offer any opinion on this head until more complete investigation had been made. From the insidious character of this diarrhœa, it often gained ground before radical measures were resorted to; and, though the journey to Europe was a step in the right direction, much remained to be done. Diet, clothing, habits and mode of life were most important questions, and the whole object in view might be summed up in the expression, "physiological rest." All irritating food must be avoided. Milk alone (cow's milk)—which, in rare cases, might be diluted with a third or fourth of plain or alkaline water—should be the only food, and should be taken in small quantities (nothing else of any kind being given) of from four to six ounces every hour. When the patient was imbibing from two to three or four quarts of milk in the twenty-four hours, he was obtaining enough nourishment to support life and enable him to recover. The author began this mode of treatment before his return to England in 1872, and after prolonged experience here found it the most effective. In ordinary cases milk diet should be adhered to for from three weeks to a month or six weeks, and even then a more varied diet should be given tentatively and with great care. Beef-tea, raw beef or other animal juice, finely minced meat not previously cooked, raw eggs with milk and farinaceous food were uncertain in their effects, and experience showed that milk *alone* replaced all other food, and dispensed with the necessity for drugs. Tea, coffee, and wines should be avoided; stimulants might be allowed in small quantities to those long accustomed to them, the best being brandy or whisky, with the milk or with some alkaline water. Regularity in times of administering nourishment, and care not to give too much at a time and to discontinue anything that apparently disagreed were essential points, as were also warmth in an equable temperature and rest in a recumbent posture. When the glazed appearance of the tongue disappeared and the organ returned to its normal size, discipline might be relaxed. The patient should reside in some mild and sheltered part of the country, though the advantages of nursing and attention in a comfortable home outweighed those of any change of locality where they might be wanting. As the case progressed the excreta improved in character and diminished in frequency, but under milk diet were always copious in quantity, semi-solid or pultaceous, and gradually increasing in consistency till constipation might require enemata or slight laxatives. The improvement of the excreta was an indication that the diet might be varied, but long after recovery was apparently complete, the greatest care must be taken, and the stay in Europe must be prolonged over one hot season at least. The administration of cholagogues was not necessary, and the only remedies used should be such as would allay irritability of the bowel, and later on, such as tended to improve the general health. Ipecacuanha might be beneficial in the early stages, if there were hepatic or portal congestion; and if the latter symptom were aggravated, a few doses of a saline laxative; or if the bowel were much irritated, small doses of Dover's powder or tincture of opium. Bismuth often did harm, and the author had practically abandoned all demulcent remedies in favour of milk. Later on quinine and iron were beneficial, but they must be laid aside at once if they appeared to disagree. The continental health resorts might be of benefit, not so much for the waters as for the change, the kind of life led there, and the mental attitude induced by the determination to do everything that could promote recovery. No disease better illustrated the recuperative power of nature than this. If perfect physiological rest were ensured early, repair rapidly took place; if degenerative changes had gone too far, or if the diarrhœa were complicated with other diseases, the issue would probably be fatal; but even in such cases amelioration might be procured, while in ordinary cases milk diet if properly carried out afforded a reasonable prospect of recovery. The author had frequently seen cases of upwards of two years' duration in persons between twenty and fifty in whom the symptoms were marked recover under the regimen described, and even in cases of longer duration, occurring in more advanced age or complicated with visceral disease, a certain measure of relief might be obtained. When milk had failed, it was generally because it had not been properly administered.—The PRESIDENT had seen a case some years ago like those that had been described; the post-mortem showed marked atrophy of the villi of the small intestine, treatment by milk and by drugs having failed to cure. He asked if the blood had been examined in these cases, and if there were any other factor beside climate in its causation.—Dr. SCRIVEN had treated these cases by milk since he heard a paper advocating this method read by a French physician at the Amsterdam Conference. He gave from three to four pints in the twenty-four hours, administering four ounces per hour for sixteen hours, and continuing this exclusive diet for seven weeks, after which he gradually led through farinaceous to ordinary foods.—Dr. E. A. SANSOM had found the milk treatment at the London Hospital very efficacious. Dr. Stephen Mackenzie had used with benefit copious enemata of nitrate of silver solution, which had a salutary effect in severe cases. Large doses of ipecacuanha had also done good.—Dr. JOHN ANDERSON asked if the milk were used raw, boiled, or peptonised. Patients on milk diet were often seized with a craving for food, which resembled the longing of the dipsomaniac for alcohol.—Mr. BALLANCE said that he had heard the late Dr. Murchison recommend milk treatment and the use of fresh bael fruit for this affection.—Dr. S. DOWSE asked if sugar were found in the urine; he regarded the disease as one of mainly functional nature.—Sir JOSEPH FAYRER, in reply, said that the blood was in a profoundly anæmic condition. The affection was entirely independent of chronic dysentery, and, if the cases were taken in hand early, could be entirely cured with pure milk alone. Traces of sugar were occasionally found in the urine, and a large amount of albumen much more frequently. The necropsies revealing the marked atrophy of gut showed that the disease was of more than functional nature.

A paper was then read by Dr. SIDNEY PHILLIPS on a case of Syphilitic Fever resembling Tertian Ague. A woman aged twenty-seven, a cabman's wife, with a healthy previous

history, married in 1879; six months later her hair commenced to fall out, she had ulceration of the tongue and sore throat. Her first three pregnancies ended in miscarriages, she then bore four healthy children, and these were followed by another miscarriage. One of the children had died of whooping-cough, the others remained well. The husband had had syphilis six months before marriage, but the wife had not shown evidence of primary sore. In May, 1888, she was attacked with fever, accompanied by shivering and sweating, the attacks at first recurred every day and then on alternate days. Ten days after her admission to hospital quinine was administered in two-grain doses three times a day, and then five grains were given before the expected pyrexial attack. This at first checked the height of the temperature curve, but afterwards lost its effect, and an increased dose did not improve matters. At length iodide of potassium and mercury were given, which not only reduced the temperature, but also relieved the distressing headache and vomiting which had been present. The differential diagnosis from Hodgkin's disease, typhoid fever, tuberculosis, ulcerative endocarditis, pyæmia, and malaria was discussed. The question whether the pyrexia was associated with a local syphilitic lesion was raised, but no localising evidence could be obtained. Erythema nodosum was present, and apart from syphilis it was rare to find this accompanied by fever. John Hunter and Fournier had described cases of syphilitic fever similar to that brought forward, but none so late as the ninth year after infection. These rare varieties of specific tertian fever occurred usually in females; the long duration of the pyrexia (eight months) was also a matter of interest.

OBSTETRICAL SOCIETY OF LONDON.

Cæsarean Section.

A MEETING of this Society was held on April 3rd, A. L. Galabin, M.D., President, in the chair.

The following specimens were exhibited:—

Dr. M. HANDFIELD JONES: (1) Solid Tumour of the Ovary; (2) Pedunculated Vaginal Cysts.

Dr. ADOLPHUS RASCH: Gangrene of the Bladder from Retroversion of the Gravid Uterus.

Dr. PLAYFAIR: (1) Intra-peritoneal Hæmatocele, with Hæmato-salpinx and Ovarian Tumour; (2) Intra-uterine Polypus with Pyo-salpinx.

Dr. W. S. A. GRIFFITH: (1) Anencephalic Fœtus, with Partial Ectopia of Heart and Adhesion of Placenta to Cranium; (2) Retention of Urine due to an Ovarian Cyst.

Dr. CHAMPNEYS read a case of Cæsarean Section for Contracted Pelvis. The patient was a secundipara, having had a child in 1882 delivered by induction of premature labour and craniotomy at seven months. She came under notice on this occasion at the end of the seventh month. She was a dwarf, with well-developed trunk, and stunted but otherwise well-formed extremities, without any signs or history of rickets. Her height was forty-four inches and three-quarters. Her pelvis was of the generally contracted flat variety, with a true conjugate of an inch and three-quarters. Cæsarean section (after Sänger) was performed about three hours and a half after the beginning of labour at term, the os uteri being about the size of a florin. There was no bleeding. The operation lasted eighty minutes—forty minutes to the beginning of the sutures, and forty minutes to the end of the operation. The sutures were deep silver and superficial silk. The ovaries were not removed, but the patient was sterilised by tying (and cutting through) both tubes with kangaroo tendon. The child is alive and healthy. There was no shock after the operation. The temperature (with the exception of slight reaction on the second and third days) resembled a normal lying-in. Recovery was uninterrupted, and the patient is now quite well. Remarks were made on Sänger's method and on Dr. Leopold's recent work, and the questions of sterilising the patients and of the limits of the operation were discussed.

Dr. PLAYFAIR said that great credit was due to Professor Sänger for impressing the importance of his antiseptic principle and for his brilliant results. Nevertheless, the custom of speaking of "Sänger's operation" as something new and different from Cæsarean section was not justifiable. It was not likely that the operation in question would entirely replace craniotomy, for it required much surgical experience and aptitude; besides, antiseptics would lessen the mortality of craniotomy also. Dr. Playfair firmly believed that strong chromic gut was quite safe and suitable for the uterine sutures. The safety of leaving unabsorbable metallic sutures in the uterine tissues appeared questionable. Dr. Playfair agreed with Dr. Champneys as to the question of sterilisation. The original proceeding undertaken by Dr. Champneys might involve certain dangers. Removal of the appendages would have scarcely added to the danger of the operation.

Dr. HERMAN noticed that Dr. Champneys did not turn the uterus out of the abdominal cavity in this case, and spoke as though his course in this respect was an "omission." Dr. Herman thought that Dr. Champneys had done well; he had preserved the uterus from needless exposure, and had succeeded in keeping foreign matter out of the peritoneum and in applying the sutures without turning out the uterus. Dr. Herman did not see any object in leaving the ovaries when the tubes had been tied in order to sterilise the patient. The ovaries were rendered useless and might become the seat of disease. Removal of the ovaries, on the other hand, appeared to involve no bad effects beyond sterilisation, which in this case was desired on reasonable grounds.

Dr. W. T. A. GRIFFITH maintained that silver wire was the proper material for the uterine sutures. One of the fundamental principles of the improved method of operating was the use of a suture which would remain safe, in spite of the frequent contractions and relaxation of the uterine wall. In one fatal case where catgut sutures were used, it was found after death that only the lower two of eighteen sutures remained tied. The remainder were all untied, and the uterine wall gaped widely.

Dr. GRIFFITH, in reply to Dr. Lewers, said the sutures were of chromic gut, but he believed that it made little difference of which form of catgut the sutures were made.

Dr. HORROCKS thought that the time was coming when a patient would prefer Sänger's operation, as being less dangerous to herself than craniotomy performed on the child. The number of patients for whom craniotomy was found to be necessary was very small, and it must be remembered that the operation was often performed several times on the same woman. He agreed with Dr. Herman about leaving the uterus in the abdomen. When lifted outside the organ became anteverted, and so the placental site would more probably be wounded. The elastic ligature was most important; he asked for precise details as to its application. Dr. Horrocks thought that Dr. Champneys' proceeding for sterilising the patient was preferable to removal of the ovaries. He asked at what point the tubes were ligatured.

Dr. J. PHILLIPS said that he had operated in a case where a large fibroid in the posterior wall had become impacted in the pelvis. Eventration of the uterus and the use of the elastic ligature were impossible, yet control of hæmorrhage and insertion of the stitches were easy. The patient died from causes apart from the questions under consideration. Two sizes of silk were used for the sutures, and the uterine incision was found perfectly united after death. Dr. Phillips did not favour chromic catgut, and preferred silk to silver sutures.

Dr. BRAXTON HICKS remarked that this case did not decide the point as regarded the mother—namely, which of the two operations was the better. In the first labour craniotomy was successful. Of course the life of the child would be an important point in guiding our decision. In this case, with a conjugate of one inch and three-quarters, there would be considerable difficulty in delivery unless in experienced hands, and Cæsarean section would be much easier and probably safer.

Mr. ALBAN DORAN did not understand the precise manner in which the tubes were ligatured. Meddling with the broad ligament, especially in cases of pregnancy and uterine tumour, was dangerous. Complete removal of the appendages would probably be safer than transfixion of the broad ligament and ligature of the tube.

Dr. HEYWOOD SMITH dwelt upon the subject of sterilisation. He thought that removal of the appendages would have increased the danger of the case. He asked why Porro's operation was not performed. It was less dangerous than Cæsarean section, and could be finished sooner. When a patient had a highly deformed pelvis so as to be in great danger during childbirth, the fœtus being sure to die, some method of sterilisation was needed, either Porro's operation or some other method. Such patients neglected advice, and, when craniotomy was performed, repeatedly allowed preg-

mancy to go to full term. If a patient of this kind came under observation after the third month, it would be best to recommend her to go to the full time, then Porro's operation should be performed. Thus two lives would probably be saved and further mischief prevented.

Dr. CULLINGWORTH spoke in favour of silk ligatures for the uterine wound. In one case, where the patient died from renal complications twenty-nine hours after the operation, the edges of the wound were found in perfect apposition. The same condition was discovered in the case mentioned by Dr. Phillips, where the patient lived four days. Dr. Cullingworth had more confidence in silk than in catgut, on account of its greater durability and the less liability of slipping. He thought it best to lift the uterus out of the abdomen. He asked Dr. Champneys if it were essentially advisable to cut very slowly when making the abdominal incision. He thought that Dr. Champneys would be able to give a very good reason for preferring in this instance Sänger's operation to Porro's.

The PRESIDENT had been led to believe from the results obtained at Dresden and Leipsic that Sänger's operation was always to be preferred, unless the uterus was already damaged by prolonged labour, and that it might establish its claims to preference even in that case. Some statistics recently supplied to him by Dr. Harris of Philadelphia, however, proved that the record of the last four years shows a mortality of 19 per cent. for the Porro-Cæsarean operation and of over 26 per cent. for the Sänger-Cæsarean section. The Sänger operation at Dresden and Leipsic had, on the other hand, proved highly successful. Porro's operation had answered better in this country. The President would still prefer Sänger's operation as a primary choice, but he thought that these figures indicated that under certain circumstances much might be said for the other alternative.

Dr. CHAMPNEYS, in reply, maintained that to Sänger belonged the credit of having modified Cæsarean section so as to make it a justifiable operation. Statistics proved this fact. Dr. Champneys used deep silver sutures because silver had been recommended and used by the most successful operators. When he operated he was not aware that Dr. Leopold had changed the deep sutures from silver to chromic gut, which proved perfectly safe. Still, silver appeared unobjectionable, and if it prevented subsequent pregnancy, as Leopold believed, that was an advantage. Chromic and carbolic gut behaved quite differently. For the deep sutures the choice lay between silver and chromic gut; for the superficial, between chromic gut and silk. Dr. Champneys, in tying the tube, chose a spot where it was small and round, before it began to expand towards the ampulla. An aneurysm needle could be readily passed close to the tube, without including any vessel or visible structure in the broad ligament. He did not agree with Dr. Herman that removal of the ovaries was a matter of indifference; nor with Mr. Doran that ligaturing the tubes was probably more dangerous than removal of the appendages. Very grave results, mental and otherwise, sometimes followed oöphorectomy. Dr. Champneys thought that it would be quite time to deprecate ligature of the tubes when harm followed. Unless something untoward occurred to this patient, he would do the same on any future occasion. He thought that turning the uterus out of the abdomen was a distinct improvement. The organ could be kept warm by towels, and the practice made it easy to prevent fluids from entering the peritoneal cavity; it also facilitated the insertion of the sutures. The upper abdominal sutures should be closed as soon as the uterus is turned out, and there is plenty of room to replace it after it is emptied. He had not refused to procure abortion in this case, but the patient did not present herself till the seventh month. The choice in a pelvis of this size seemed to be between early abortion and Cæsarean section. The elastic ligature was a piece of rubber about the size of the little finger. It was tied in a single knot and the ends clipped by pressure forceps. Dr. Champneys removed all sponges before closing the uterus. Hæmorrhage was almost absent till rupture of the membranes relieved the pressure. It did not occur when the elastic ligature was removed. The uterus was neither hard nor small; it felt as it was a few hours after normal delivery, when that organ was large and not hard, yet no hæmorrhage occurred. Dr. Champneys had not been deliberately slow in making the uterine incision, but cut slowly so that he might see best what he was dividing. When the uterus was completely opened, he proceeded quickly. As to moral responsibility of the patient, the obstetrician gives advice; his duty also was to get the patient out of her difficulty. If she did not take advice about not becoming pregnant again, we had nothing to do with appraising her moral responsibility. The statistics of Cæsarean section and Porro's operation were at present in a very confusing condition. He would prefer in the meanwhile to compare series performed by a competent operator, but he might say that the statistics of Cæsarean section in experienced hands were so good that he thought Porro's operation should be restricted to damaged uteri.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Empyema treated by Resection of part of a Rib.—Chronic Suppurative Discharges from the External and Middle Ear.

AN ordinary meeting of this Society was held on March 1st, Dr. Travers, President, in the chair.

Mr. JOHN R. LUNN narrated the following three cases of Empyema treated by Resection of part of a Rib:—Case 1: John D——, aged three years, an unhealthy-looking boy, was admitted into the Marylebone Infirmary on July 10th, 1888, with bronchitis. There were signs of pleuritic effusion on the right side of the chest. After a few days an ounce of thick tenacious pus was withdrawn by the aspirator. His temperature was 105°. On Aug. 1st Mr. Lunn resected a piece of the seventh rib and washed out the pleural cavity with boracic lotion. The dressings were removed on the fifth day, when the temperature was 98°, and the wound had nearly healed. On Aug. 7th the temperature was 101°. The old opening was enlarged with dressing forceps, after which he recovered. On the 12th signs of lateral curvature were noticed in the dorsal region leaning from the affected side. A Sayre's jacket was applied. Case 2: Edith D——, aged five years, rickety, was admitted on July 26th, 1888, with right empyema. Temperature 101°. On July 31st a portion of the seventh rib was resected on the right side; much thick pus and membrane escaped. On Aug. 1st the temperature was normal. On the 13th the child was very ill again, and the chest was reopened and recovery took place. A similar lateral curvature occurred as in Case 1, and was treated the same; the children being slung in a kind of hammock while the plaster was being applied, as recommended by Mr. Davy of Westminster Hospital. Case 3: Annie N——, aged fifteen, was admitted on June 1st, 1888, with right pleuritic effusion. She was tapped on June 5th, clear fluid being withdrawn by the aspirator. On the 12th the temperature rose to 103·2°, when twelve ounces of thick pus were drawn off. She still continued to get worse, and Mr. Lunn resected a piece of the eighth rib, and thoroughly drained the right pleural cavity, which was washed out with warm carbolic lotion (1 in 40). This had soon to be discontinued on account of carbolic irritation. The wound was then dressed with iodoform and wood wool. She was sent to a convalescent home in September, and no lateral curvature was noted. On Oct. 20th she was readmitted with slight discharge from the old wound. The lung sounds were healthy, the lung expanding well. She seemed fairly well. Slight falling away of the dorsal spine from the affected side was noted for the first time. She was put up in a plaster jacket, and has since returned to service, the wound being quite healed. Mr. Lunn remarked that empyemas should be treated as abscesses generally—i.e., opened fairly early, but with strict antiseptic precautions. He believed with Mr. Godlee that the eighth or ninth intercostal space exterior to the angle of the scapula was the best and safest place for drainage. He used bone forceps for dividing the bone. After removing the portion of bone, a thick drainage tube about an inch long was passed into the opening, and secured with thread and a safety pin. He then washed out the pleural cavity with Condy's fluid in preference to carbolic lotion. Some weeks afterwards the patients have generally developed lateral curvature from the affected side. He considered it to be important to discontinue washing out when the discharge became less.

Dr. MACNAUGHTON JONES read a paper on Chronic Suppurative Discharges from the External and Middle Ear. He first reviewed the present position of otology, both as regarded ear ferments and bacteria, whether fungi, or septic, pathogenic, or malarial microbes. He pointed out how

these microbes relatively acted in inducing catarrhal suppurative conditions of the ear, collating the researches of Löwenberg, Berzold, Weberhel, Orne Green, and Zanfal, which, when viewed side by side with the works of such bacteriologists as Pasteur, Keekes, Crudelli, and others, established the etiological basis of the greater part of modern aural treatment. He instanced by a new etiological classification some suppurative conditions founded on this view, and a differentiation of these suppurative states themselves; accompanying these tables was a classification of the various remedies, antiseptic and other, availed of in the treatment of chronic suppurative discharges. He critically compared in detail the different moist and dry antiseptic methods of treatment, indicating the dangers to be avoided in the latter, and the special circumstances under which he still preferred the former method. The mode of dealing with collateral complications, such as polypi and aspergillus, was detailed, the special crocodile levering forceps and galvanic cautery that he uses being shown, as well as the method of working with his armed aural probe in cleansing and applying medicaments to the ear.—Dr. THUDICHUM showed a fungus two inches and a half in diameter, developed from the mycelium from an ear. He objected to syringing. He adopted the dry method after cleansing with cotton wool, blowing in a powder of iodoform and boracic acid.—Dr. FENNINGS called attention to a blow on the ear as a cause. He saw a boy suffering from facial neuralgia, and on examining the ear next day found a rent in the membrane, the result of the blow.—Mr. WILLIAM HILL endorsed Dr. Macnaughton Jones' view of the importance of recognising the fact that aural suppurations were associated with the presence of micro-organisms. He pointed out that the various tonsils, including masses of adenoid tissue in the Eustachian tube and naso-pharynx, must be regarded as manufactories for *scavenging* leucocytes, which latter migrate into the mouth, pharynx, nose, Eustachian tube, and tympanum, and whose function is to devour micro-organisms of suspicious character prowling about those regions. Where an individual was "below par," as in the strumous diathesis for instance, the various tonsils were abnormal and the scavenging leucocytes less in number and vigour. Hence such individuals were susceptible of zymotic diseases and often the subjects of aural discharges. He strongly urged the importance of cod-liver oil, iodide and phosphate of iron, and sulphide of calcium as promoting more healthy action.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of this Society was held on Friday, March 8th, Dr. Corfield, President, in the chair.

Dr. LOUIS PARKES read a paper on the Artisans and Labourers' Dwellings (Torrens') Acts, in which he advocated the enforcement of these Acts for the repair or demolition of unwholesome houses. The Acts gave the local authorities power to compel repairs in accordance with the specification of their surveyor—a provision not contained in any other Act for dealing with insanitary property. The disadvantages of Torrens' Acts lay in the cumbersome nature of the procedure necessary, and the power of appeal at various stages by the owner. Simplification and more summary powers were urgently needed. The subject of back-to-back houses was considered; and it was urged that although the evidence in support of the view that want of through ventilation was a cause of disease was not conclusive, yet it was highly desirable that the building of houses back to back should be rendered illegal. Other defects which might cause a house to be unfit for human habitation, such as defective light and ventilation, dampness of site, and structural decay, were alluded to.

Dr. H. TOMKINS communicated a paper on a new Disinfecting Apparatus. In this machine steam under pressure is used as the means of disinfection, and after several months' constant use, Dr. Tomkins gave an exceedingly favourable report as to its efficiency, simplicity in working, and economy. It is constructed by the firm at Nottingham which has for some years constructed the automatic hot-air disinfector known as Ransome's, but which is destined to be superseded by the much better steam machine. The new machine possesses several improvements and advantages over any of those yet in the market. It is self-contained, the boiler and disinfecting chamber being one. It is so constructed that no condensation takes place in its interior, and it possesses an ingenious arrangement whereby a powerful current of hot air can be blown through the chamber in addition to the steam, so that it can be employed as a simple hot-air disinfector for such articles as cannot be submitted to steam; and it can also be used to remove the last trace of any moisture after the steam has been applied, an advantage especially where bedding &c. is concerned. The result of a series of experiments conducted at Leicester conjointly by Dr. Whitelegge of Nottingham, Dr. Ashby of Reading, and Dr. Tomkins were given in detail, and in the author's opinion this machine satisfactorily fulfilled the whole of the following conditions, which he considered necessary in any completely satisfactory apparatus: (1) The efficiency of the disinfection is independent of the workmen in charge; (2) the heat rapidly penetrates bulky and non-conducting articles; (3) delicate materials and fabrics are not injured; (4) the heat is uniformly distributed in all parts of the chamber; (5) the required temperature is easily and constantly maintained; (6) there is no condensation of steam, and the articles are dry on removal; (7) there is a trustworthy index to the internal temperature; (8) efficient means are provided for ventilation of chamber whilst working; and (9) it is economical in time and working expenses.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

AT a meeting of the Society on Wednesday, March 13th (Dr. Thorne Thorne, President, in the chair), Dr. W. R. SMITH read a paper entitled "A Review of our Knowledge of the relation of Micro-organisms to Diseases in Man." He dealt exhaustively with the etiology of tuberculosis, leprosy, erysipelas, suppurative and septic diseases, gonorrhœa, puerperal fever, glanders, relapsing fever, actinomycosis, and anthrax. The paper was illustrated by a large number of microscopical specimens. The meeting terminated with an exhibition of microscopic preparations.

MIDLAND MEDICAL SOCIETY.

AN ordinary meeting was held on Feb. 20th, Hugh Ker, F.R.C.S.Ed., President, in the chair.

Jacksonian Epilepsy due to a Cortical Growth. — Dr. SUCKLING showed a boy aged eight suffering from paresis of the right upper and lower extremities, and occasional convulsive seizures, beginning in the great toe and spreading upwards, ultimately involving the whole of the right lower and upper extremities. The boy had complained of headache, chiefly frontal, but more on the left side than on the right, for about twelve months, and eight months ago he was thought to be lame in the right foot. Three months ago, after having suffered severely from headache, he fell down in the street in a fit, and weakness of the right side was noticed afterwards. While in the infirmary he had had many convulsions, always preceded by an aura commencing in the right big toe. The right extremities and right side of the face were alone convulsed, the face being only slightly affected. There had been no loss of consciousness during the attacks. Dr. Suckling considered that there was no doubt about the existence of a tumour (probably scrofulous), either in the grey matter or immediately beneath, in the upper third of the ascending frontal convolution. The application of a blister over the motor area on the left side of the scalp, together with the administration of iodide and bromide of potassium, with small doses of mercury, had checked the convulsions, but had not improved the paresis. Dr. Suckling proposes trephining for the removal of the growth, unless improvement takes place within a few weeks.

Paroxysmal Tremor.—Dr. SUCKLING also introduced a man aged sixty, a labourer, who for two years had suffered from attacks of violent tremor of the right upper extremity. The patient had not had syphilis, but had occasionally suffered from rheumatic pains in the knees. He is a heavy smoker, consuming at least four ounces of "Cavendish" a week. Fourteen years ago his eyesight became dim, and he had to be led about, but he rapidly recovered from this. Dr. Suckling had witnessed two of the attacks; one of them was induced by the noise of a falling blind in the out-patient room. The tremor affected the right upper extremity only; it was of great amplitude and violence, consisting of very rapid flexions and extensions of the forearm, which could

not be controlled voluntarily or by force. There is no aura preceding an attack, but coincidently with the onset of the tremor the patient perceives pain in the upper part of the right thigh. There is no loss of power in the right arm or leg, no alteration in the reflexes, and no optic neuritis. Emotional disturbance or a loud noise, especially if sudden and unexpected, at once brings on the spasm. The tremor ceases abruptly and spontaneously, the patient saying it "ends with a snap." He has had no injury, and there is no sign of paralysis or rigidity. His father was a great smoker, and died insane. Dr. Suckling considered that the tremor would probably become continuous, and the case one of paralysis agitans.

Osteitis Deformans.—Mr. AUGUSTUS CLAY showed a woman aged fifty-seven, but looking older, suffering from osteitis deformans.

Abscess of Brain.—Mr. WHITCOMBE exhibited the brain of a man who eight weeks previously had sustained a fracture of the base of the skull. The left temporo-sphenoidal lobe was the seat of a large abscess. The symptoms during life were those of compression, there being no symptoms of abscess or of localised brain mischief.

Dr. FOXWELL read a paper on Pulmonary Cavities due to causes other than the breaking down of tubercular deposits.

Pedunculated Myomata.—Mr. J. W. TAYLOR showed three specimens which he had successfully removed by the écraseur.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

AT the meeting on Feb. 1st, the PRESIDENT (Dr. Handford) showed the sternum, liver, and lungs (the seats of sarcomatous growths) from a woman who had suffered from Ophthalmoplegia. He also showed shreds of mucous membrane passed per anum by a woman convalescent from Jaundice.

Dr. C. H. CATTLE introduced a man, aged forty-seven, with symptoms due to intra-thoracic pressure thought to be caused by an Aneurysm springing from the concavity of the Arch of the Aorta, of which, however, there were no external signs beyond slight dulness and pulsation in the first intercostal space near the left border of the sternum, and accentuation of the second sound in the same situation.

Rupture of the Popliteal Artery.—Mr. R. ANDERSON read an account of a case of incomplete rupture of the popliteal artery, in which transfusion had been performed. The patient, a boy aged fifteen, was admitted into the Nottingham General Hospital on June 30th, 1888. A month previously he had his knee crushed between two colliery trams, and had not been able to move the limb since that time. On admission the following were the symptoms present: (1) Swelling of the whole limb around the lower third of the femur, most marked on the front and inner sides; (2) redness and shining of the skin, with an evident sense of fluctuation; (3) absence of pulsation in the swelling; (4) scarcely any interference with the circulation in the leg; (5) pyrexia. The case was thought to be one of acute and suppurating periostitis. Shortly after admission an incision was made over the fluctuating part of the swelling and a drainage tube put in. Some turbid serum and dark clot were let out; no pus. A week afterwards a profuse arterial hæmorrhage occurred from the wound. The patient became blanched, cold, and gasping. Other means having been ineffectual, an intravenous saline solution—two grains of chloride of sodium to the ounce of warm water—was then injected; eighteen ounces of this were allowed to flow into the median basilic vein, with most gratifying results. On the following day the popliteal artery was cut down upon, and found to be partially ruptured. Both ends were ligatured; the vein was intact. Very little blood was lost, but the boy passed into an alarming state, and presented the same symptoms as on the previous day. Eight ounces of saline solution were again passed into the median basilic vein, with striking benefit. The patient made a good recovery, and was discharged six weeks after operation.

Multiple Sarcomata of Bone.—Mr. LLOYD showed a man aged forty-four, with three tumours growing from the left clavicle, right ilium, and the left ninth and tenth ribs. They were tense, elastic, and semi-fluctuant, and over each a well-marked bruit could be heard. The pulsation was expansive and synchronous with the cardiac systole. The growth on the clavicle was first noticed sixteen months ago, shortly after a strain to the shoulder received whilst mowing. Two months later the iliac growth appeared, and the growth in the back a month or two afterwards. The first was the size of a cricket-ball, the second that of a cocoanut, and the third that of a hen's egg.

Dr. BOOBBYER read notes on a case of Semi-confluent Small-pox in a woman six months pregnant, who was subsequently delivered at full term of a perfectly healthy child.

An ordinary meeting of this Society was held on March 1st, Dr. H. Handford, President, in the chair.

Suppuration of Antrum of Highmore.—Dr. DONALD STEWART read a paper on this subject, and described three cases in which pus was detected by syringing the antrum through the natural opening in the middle nasal meatus. Nasal polypi had been removed from one nostril in each case, chronic suppuration remaining after the operation. This was found to be due to bone disease in the deeper nasal cavities. In all three the teeth of the affected side were sound. In one case a sound molar was drawn to facilitate drainage. There was no dilatation of the antrum in any one of the three. Dr. Stewart maintained that the antrum mischief had its starting-place in the nose, for when the disease of the latter improved a corresponding change was seen in the antrum. Dr. Stewart quoted Ziem of Dantzic, who himself had suffered six years from this condition, in support of his views. Two of the above patients learned to syringe the cavity through the natural opening in the middle meatus; for the third, the molar tooth above mentioned was extracted, and the alveolus bored through. Dr. Stewart further described the operation of Mikulicz, who opened the antrum through the inferior meatus of the nose, and gave an account of symptoms and treatment in cases dependent upon dental, alveolar, and other disease.

Wounding with Poisoned Arrow.—Mr. JOSEPH WHITE described the case of a servant girl aged twenty-three, who, whilst standing on a "pair of steps" dusting some shields &c. on the wall of the hall, fell to the ground, and in her fall had her right arm pierced by the point of an Indian arrow, which was arranged point upwards in a stand below. The arrow was withdrawn in two minutes, and the patient was seen within half an hour of the time of the accident. When seen, the patient was in a state of collapse, with slow, shallow, jerking respiration and very feeble circulation. As the wound was throughout its track covered with brown (apparently vegetable) substance, it and the surrounding tissues were immediately freely excised and stimulants administered. The breathing becoming rapidly more slow and feeble, and then ceasing, an interrupted galvanic current was passed through the diaphragm, and artificial respiration kept up for more than hour, during which time the heart acted extremely feebly. In two hours from the occurrence of the accident, and when artificial respiration had been maintained for about an hour and a half, respiration gradually returned and the pulse improved, and in a short time the patient was able to take small quantities of fluid nourishment, and during the day she gradually revived. For three or four days the girl remained in a very feeble condition. She was drowsy and disinclined for any mental effort, had persistent loathing of food, nausea, and constant headache, and during this time there was a large flow of urine, of low specific gravity (1008), showing traces of albumen, and on the third day very slightly bloody. There was no trace of sugar. The wound on the arm after excision rapidly got well. It was believed that the arrow had been poisoned with wourali (curare), which was shown by the experiments of Claude Bernard, Sibson, and others to produce effects of a strikingly similar kind to those observed in this case.

LEICESTER MEDICAL SOCIETY.

A MEETING of this Society was held on Friday, Feb. 1st; Dr. Cooper, President, in the chair.

Bergeon's Treatment of Phthisis.—Dr. PRATT read notes of two cases in which he had tried this treatment with unsatisfactory result.

Strophanthus.—Dr. POPE read notes on sixteen cases in which he had prescribed this drug. He remarked on the similarity of its effects to that of digitalis, pointing out that it differed principally in the rapidity of its action. All the

cases except two had valvular disease of the heart; the exceptions were one of irregular heart from tobacco and gout, the other a case of renal dropsy. He prescribed the tincture of the strength of 1 in 20; the usual dose was five minims. It had produced vomiting in five cases, four of which were females, and he considered that this fact alone showed its inferiority to digitalis, which he had never known produce vomiting except in one case, where it was prescribed after strophanthus had been discontinued from the same cause, and even then, on being given in an effervescing mixture, the digitalis was well borne. Having pointed out the manner of its action, he described a typical case of feeble heart, mitral insufficiency, and albuminuria, with anarsarca, cyanosis, and dyspnœa, all of which symptoms were much relieved and the albumen nearly disappeared after its use. He found it, in common with digitalis, to be of most service in cases of mitral regurgitation. In three cases of tricuspid insufficiency it relieved in two, the third died unrelieved. Its effect in the case of functional irregularity of the heart was very good, and it also answered well in renal dropsy. In five cases it did no good. In four it acted well after digitalis had been given with little or no effect. Altogether, it either failed, or had to be discontinued owing to vomiting, in half the cases referred to. These results, he thought, gave a less favourable view of the drug than it deserved, owing to the fact that many of the cases were of a very severe nature. He considered that strophanthus was to be regarded as a valuable addition to the Pharmacopœia, but that it should be principally used where digitalis failed, or where a specially rapid action was required.

Large Growths on Mitral Valves.—Dr. ROLL showed a heart with growths which in the fresh specimen were of the size of half a large walnut on each of the cusps of the mitral valve. The spleen from the same case showed large infarcts.

Foreign Body in the Umbilicus.—Mr. DOUGLAS showed a steel pin pointed at both ends and three inches long which he had removed from a child. The patient was brought to him with one end of the pin protruding from the umbilicus. It was removed without difficulty. There was no history of its having been swallowed. It was a good deal eroded, and appeared to have been a large bonnet pin, the glass head of which had disappeared.

Dr. POPE showed a Kidney with an Oxalic Calculus, measuring about an inch and a half by one inch, impacted in the pelvis.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

A MEETING of the members of this Association was held at York on March 29th, when there was a large attendance. Dr. Mitchell of Doncaster, the President, occupied the chair.

The Secretary, Dr. J. MCLINTOCK (Bradford), stated that the committee had considered a communication from the North-Western Association of Medical Officers of Health with regard to registration. The committee had agreed that instead of joining in the petition proposed to be forwarded from Manchester, they should ask only for an inquiry into the registration of deaths, and that the Home Secretary should obtain information from medical officers of health as to their experience.—The PRESIDENT said their complaint was that there was a great deal of looseness in the specification of the cause of death. Whilst sympathising with the objects of the petition their committee thought it unwise to lay down any exact line for the Home Secretary to follow, and would rather leave the consideration of the whole question to his discretion.

Dr. NORTH then read a paper entitled "Notes on Diphtheria," and maintained that during the past two or three years there had been an increase in the deaths from that cause. So frightful was the mortality in York and other places as to make them wonder whether they were on the eve of an epidemic of that terrible disease. The most fatal age was from two to ten years. Dr. North expressed the opinion that diphtheria is contagious. In the discussion which followed, the general opinion was that the disease is infectious, and is frequently traceable to faulty drains. The President called attention to the desirability of medical men stating on certificates of deaths of children whether they were insured or not. He thought that might tend to reduce the death-rate of children.

Reviews and Notices of Books.

The Bronchi and Pulmonary Bloodvessels. By WM. EWART, M.D. Cantab., F.R.C.P., Physician to St. George's Hospital; Physician to the Belgrave Hospital for Children; late Assistant Physician and Pathologist to the Brompton Hospital for Consumption and Diseases of the Chest. London: J. & A. Churchill. 1889.

IN the introduction to this valuable monograph, which invites the careful study of every anatomist and physician, Dr. Ewart justly points out the scantiness of our knowledge of the coarse anatomy of the individual components of the lungs, and especially of the divisions of the bronchi and of the pulmonary bloodvessels, when compared with the full descriptions given in all our text-books of the histological characters of the minute bronchioles and the air-cells at the periphery of the lung, and he has most thoroughly succeeded in filling up this gap in our anatomical investigations. This necessarily involves a critical study of the well-known views of the late Professor Aeby on the "Bronchial Tree of Mammalia and of Man," which is the only complete treatise that has been written on any part of the subject investigated by Dr. Ewart. The author divides his book into three sections: dealing firstly with our current knowledge and Professor Aeby's researches; then with the detailed anatomy of the bronchial system, studied from the bronchial cast and from dissections; and lastly with the arrangement of the pulmonary bloodvessels, when examined in a similar manner. In criticising Aeby's work, Dr. Ewart looks at the distribution of the bronchi from standpoints directly opposed to those taken by the Swiss anatomist, for instead of limiting his observations to the primary branches of the main bronchus, he takes as his type their ultimate subdivisions at the periphery of the lung; and instead of commencing his investigations from a morphological basis, and working up through a comparative series of the mammalia, he starts from man, and shows that theories formed for animals, with a different condition of thorax and relation of thoracic viscera, must be so far modified when applied to the human subject as to lose any value which they may possess as being brought under a wider generalisation. This will be readily seen from the following conclusions: "It may therefore be held that, far from being the expression of an abstract law of development, the axial character which Professor Aeby finds to be so characteristic of the bronchial tree of most mammals is in them associated, as a result, with certain anatomical and physiological peculiarities. The almost entire disappearance of the axial type in man strongly suggests that the question is one mainly of adaptation" (p. 32). "The foregoing considerations tend, in spite of *primâ-facie* appearances, to support the view that (1) all bronchi are dichotomous; and (2) that in any bronchial pair, the greater size of one bronchus is correlated with the greater mass of lung tissue which it must supply with air. Thus.....dichotomy does exist, at any rate, in the limited sense that never more than two branches arise from any one division" (p. 36). So far as the genus Homo is concerned, the two great theories of Aeby—that the bronchial stem is an axial structure, and that the typical branching is "monopodic" and bipinnate, alternately ventral and dorsal, but not "dichotomous" as formerly supposed—are of very limited significance, and have many important exceptions, when the human bronchial system is studied throughout, and without any preconceived view as to its arrangement. His third theory, by which the lobes of the lungs are classified into eparterial and hyparterial, according to the position at which the pulmonary artery crosses the main bronchus relatively to the giving off of the branches from the bronchus—i.e., whether the crossing takes place *before* or

after any branches have arisen,—seems too arbitrary to form a basis for such a comprehensive scheme. It makes the human lungs of a mixed type, so that while the lower lobes of both are identical and hyparterial, their upper lobes are not equivalent or homologous, for the right is eparterial, whilst the left is hyparterial. From this the further hypothesis follows that the left lung possesses no true upper lobe, but that this lobe so-called is the homologue of the right middle lobe. In fact, cases of unsymmetrical arrangement are common even among the lower mammalia, and an attempt at a generalisation on the arrangement of the primary branches of the bronchi throughout the mammalian series leads to anomalies which seriously invalidate its worth. If, however, the Swiss professor was tempted too far in his endeavour to unite all the bronchial peculiarities under a comprehensive plan, too great praise cannot be accorded him for the marvellous patience with which he worked at the different measurements, absolute and comparative, of the length and calibre of the trachea, bronchi, and primary bronchial branches. These facts are most valuable, are independent of all theory, and can only be studied in the elaborate tables in his great work published at Leipsic in 1880. Professor Aeby's views have obtained such currency among English students and anatomists, from having been introduced into our most modern and comprehensive text-books, that we have thought it well to consider rather fully the objections which many have shared, but to which Dr. Ewart is the first to call attention.

The second and third sections of Dr. Ewart's work (186 out of 226 quarto pages) contain the record of his own researches into the distribution and arrangement of the bronchi and pulmonary bloodvessels, and are invaluable to all who would be acquainted with their detailed anatomy. His methods of investigation of the bronchi were practically two in number: dissection, or putrefactive maceration whenever applicable, and intra-bronchial injections of a fusible metal, composed of two parts of tin, four of lead, seven of bismuth, and one of cadmium, and their completeness and success can be readily judged by examining the photographs which have been reproduced to illustrate the descriptions. The arteries and veins were also injected in succession, and their relations to the bronchi thus secured by a threefold injection; but simultaneous injections were not attempted. The first difficulty in describing the arrangement of the tubes and vessels was the want of a systematic nomenclature, and as Dr. Ewart could not adopt that of Professor Aeby, inasmuch as this was based on theoretical considerations with which he did not agree, it became necessary for him to construct another, and we think he was well advised in choosing for it a purely anatomical basis. This has the further advantage of making it available to the physician and surgeon as well as to the human anatomist, even if it leaves out of sight the special wants of the comparative anatomist and morphologist, although a comparison of both nomenclatures is given, so that they may be easily studied side by side. Dr. Ewart first attempts to clear up the confusion which exists as to the limits of the main bronchi due to Professor Aeby's carrying this name not only beyond the point of their first division, but even as far as the base of the lung, and thereby discarding the lobes as a basis for description. He practically resumes the old nomenclature, which gives rise to no difficulty for the left bronchus and its divisions, and by coining the name "intermediate bronchus" for the inferior segment on the right side makes this also clear, for the main bronchus on this side can then be described as dividing into an upper lobar and an "intermediate" tube, which in its turn breaks up into middle lobar and inferior lobar bronchi. The detailed arrangement and subdivisions of the right and left bronchial trees are next considered separately, and their points of agreement and difference, mainly in reference to the upper and middle lobes, are very plainly pointed out. The regions are to some extent named as they are now known in clinical anatomy—as apex, base, pectoral region, &c.; but as these correspond in great measure to the respective territories of the several primary bronchi, the natural divisions of the bronchial tree have been adopted as the best and easiest plan of description. We thus have an apical, axillary, and pectoral distribution corresponding to the upper area of the lung; a cardiac, posterior horizontal, and retro-cardiac distribution corresponding to its central area; and a basic area, subdivided into anterior basic, axillary basic, and posterior basic districts, according to the distribution of the three large basic stems. The various divisions and subdivisions of each of these nine principal stems are described on both sides, and synoptical tables are added to give a summary of the names and branching of the tubes distributed to each district. The immense amount of labour involved, and the conscientious manner in which the author has worked out such a mass of detailed observations, may be imagined when we find that a special notation had to be invented to express the degree of relationship between a main bronchus and a given tube. A single artery accompanies each bronchus, so that the arterial distribution is a duplicate of the bronchial tree, and the description of the bronchial divisions applies equally well to the arterial branches; but whilst the arteries accompany the air tubes in immediate juxtaposition, the veins are constantly separate, and usually ramify as far from the bronchi as possible, generally selecting the middle of their interspaces. Throughout the lung the two bloodvessels follow an independent course, and between them there is neither symmetry of distribution nor regularity of distance. A special rough sketch of the veins has been introduced to elucidate their description, and a chromolithograph in three colours, although merely diagrammatic, shows well the more material differences between the arrangement of the veins and that of the arteries and air tubes. Special features in the book are the copious use of black type and of a marginal summary, which greatly facilitate reference in so intricate a study, and the author and publisher are to be congratulated on the admirably clear manner in which such a mass of detail has been presented to the reader.

The Year-book of Treatment for 1889. London: Cassell and Company. Pp. 344.

THE general features and the advantages of the "Year-book of Treatment" are so universally recognised and appreciated that the present issue does not call for detailed consideration. It maintains its claim to the position of a critical review; and, although on the whole it is a very satisfactory production, it presents the inequalities presumably inseparable from a work to which so many different writers have contributed. It is asserted that the medical literature of all countries has been placed under contribution, yet it is very obvious that in certain instances the compilers have not availed themselves of many important sources of information, even of native growth. The individuality of the reviewers remains as marked as ever, but as a rule the busy practitioner will have reason to be grateful for the cursory criticism appended to the records of some of the newer modes of treatment. As usual, Dr. Mitchell Bruce gives the report upon treatment of Diseases of the Heart and Circulation, strophanthus and strophanthin occupying prominent places, together with Huchard's observations upon Digitalis, which were reviewed in these columns. The Oertel system is once more estimated through the experience of many observers, the general balance of opinion being decidedly favourable. Dr. E. Markham Skerritt deals with Diseases of the Lungs and Organs of Respiration, the use of

various inhalations and the treatment of lung disease by high altitudes being the most important contributions. Bergeon's treatment is adversely commented upon by several writers. The experience of many new hypnotics occupies much space in the section of Diseases of the Nervous System reported upon by Dr. James Ross and Dr. E. S. Reynolds. The section upon Diseases of the Stomach, Intestines, &c., by Sir Dyce Duckworth and Dr. R. Maguire is specially noteworthy for the value of the comments of the reporters. Dr. Ralfe deals with Diseases of the Kidney, Diabetes, &c., and gives due prominence to Dr. Mitchell Bruce's remarks upon the use of Morphine in Diabetes. The sections upon Rheumatism and Gout by Dr. Maguire, upon Anæmia and Allied Conditions by Dr. Sidney Coupland, and upon Medical Diseases of Children by Dr. Goodhart are very satisfactory, although they do not present any striking novelties. Dreschfeld's investigations with pyrodin find a place in the section on Continued Fevers by Dr. Sidney Phillips. The different surgical sections are in the hands of Mr. Frederick Treves, Mr. W. J. Walsham, Mr. Edmund Owen, Mr. Reginald Harrison, and Mr. Alfred Cooper. Other departments are critically reviewed by Dr. Berry Hart, Dr. Herman, Mr. Malcolm Morris, Mr. Henry Power, Mr. G. P. Field, and Dr. McBride. As a whole, the "Year-book of Treatment" continues to be an invaluable addition to medical literature, and it will be consulted with advantage by many practitioners who have not the time or the opportunity to refer to the original voluminous papers here given in brief. It is comparatively free from typographical errors, though "caffein" occurs on page 25 and in the index, and "pyridin, a new antipyretic," on page 343.

Jenner and Vaccination: a Strange Chapter of Medical History. By CHARLES CREIGHTON, M.D. London: Swan Sonnenschein and Co. 1889.

THE profession will have been prepared for the appearance of this book. It is a natural and necessary sequel to its author's recent contributions to the subject of vaccination, and may be taken as the justification of the attitude he has assumed with respect to this question. For the whole aim and purport of the work is to demonstrate that Jenner was not merely mistaken in his interpretation of the nature of cow-pox—a venial fault when we consider the limitations to scientific inquiry in his day,—but that he wilfully imposed upon a too credulous people with his fanciful and baseless theories; the inference, of course, being that the civilised world, and especially the medical profession, have gone blundering on in the dark under such false and treacherous guidance. For according to Dr. Creighton—who, be it remembered, speaks only from the results of his literary studies, the extent and depth of which we by no means wish to disparage—the practical experience of the efficacy of vaccination as a prophylactic of small-pox, which has accumulated in all parts of the world for so long a period, is as nothing compared with the laxity of reasoning which he alleges is displayed by the promulgators of the practice, nor of any avail against the failures of early years and the arguments of pamphleteers opposed to innovations in medical theory and practice. The author of such a work assumes a grave responsibility, for it is plain that it has no *raison d'être* except as an attack upon the utility of vaccination. Grant even that the doctrine of "variolæ vaccinæ," is baseless, and not to be sustained by modern investigation: does that detract one jot from the overwhelming proof of the efficacy of vaccination? Grant even that Jenner was the knave or fool which Dr. Creighton believes him to have been, he yet managed to stumble upon at least one fact which has received the confirmation of his posterity. We do not blame Dr. Creighton for publishing his views, although we do think he is far more trenchant in his expressions than the subject warrants, and must seriously protest against the animus he shows. This will go far to defeat the object he has in view, for, though professedly impartial, his pen is steeped in gall, and his language is that of a partisan. Still, it must be remembered he had not only to discredit Jenner, but also to justify certain fanciful doctrines respecting cow-pox on the one hand and small-pox on the other which as yet have failed to gain acceptance.

THE PNEUMONIA EPIDEMIC OF MIDDLESBROUGH.

THE long-expected report of Dr. Ballard on the epidemic of "so-called pneumonia" at Middlesbrough is at length published. It is only an interim report, but it gives the principal palpable facts investigated by Dr. Ballard of the remarkable disease which has alarmed the public and been fatal in a period of six months to 369 persons, of whom no less than 288 were males. This number includes the deaths from the same disease that happened in three adjoining local board districts. Epidemic pneumonia is not a new idea to our readers or to the Local Government Board. But the special investigation that has been made by Dr. Ballard, to whom we owe other investigations of much public importance, is the first that has been instituted. We must defer a detailed notice of the subject till the appearance of the full report. But a few of the main facts must be given without delay. Middlesbrough has grown like a mushroom, till it has now a population of 69,255. Dr. Malcolmson, the medical officer of health, first notified to the Board in May last that an epidemic of pneumonia prevailed, and was very fatal. Dr. Ballard gives the mortality in six four-weekly periods from Feb. 25th to July 14th, as follows: 35, 57, 51, 65, 106, 55. In age-groups the deaths were: up to fifteen, 35; fifteen to forty-five, 155; forty-five to sixty-five, 136; over sixty-five, 43. One of the most striking features of the mortality is its terrible incidence on the *male* sex. As we have said, of the 369 deaths no less than 288 were in males, whereas in ordinary pneumonia the mortality of the sexes is not very unequal. The clinical features of the disease are, generally, sudden attack, rise of temperature, pain in side, rapid pulse and breathing, usually vomiting or diarrhœa, delirium, accompanied or soon followed by the physical signs of pleuro-pneumonia. The expectoration is at first "rusty," but afterwards of a prune-juice character. The fresh lung juice has been examined by Dr. Klein, who finds in it a hitherto undescribed bacillus, which he regards as specific. In the fatal cases death occurred often in from three to five days. The post-mortem appearances were those of lobar pneumonia, with invariable effusion of lymph on both costal and pulmonary pleura, following coagula in the heart, apparently of ante-mortem formation; the spleen invariably pulpy; and ecchymoses of the mucous membrane of the stomach. Dr. Ballard regards the disease as a specific febrile one, and *infectious*. He promises to give conclusive evidence on this point in his full report. He regards it as communicated either through direct relation of individuals or through sewers contaminated with sputa or other excretions of the sick, or through food. Exposure to "slag dust" was regarded by many as a cause; but Dr. Ballard only considers it a predisposing or assisting cause. The lesson of Dr. Ballard's investigation is that the disease must be regarded as infectious, and that the same precautions must be taken against it as against other infectious diseases capable of contaminating air, sewers, or food.

NORTH RIDING INFIRMARY. — The Court of Governors of this institution, at Middlesbrough, held their annual meeting last week. The financial statement was satisfactory. The in- and out-patients treated had exceeded the number of any previous year. The income from all sources had enabled the committee to liquidate an old debt and leave a balance to the credit of the infirmary.

THE LANCET.

LONDON: SATURDAY, APRIL 13, 1889.

IT is about as rational to investigate the merits and value of vaccination as a security against small-pox as it would be to question the utility of lifeboats, or Davy lamps, or fire brigades. A few accidents and drawbacks mar the glory of every discovery and device for the mitigation of human calamity, but the benefits remain, and make history a very much more cheerful and creditable thing than it would otherwise be. Still, though we cannot appraise very highly the national intelligence that is to be gratified by a brand new inquiry into the "whole question" of vaccination, we are far from blaming the Government for assenting to "a thorough investigation," as Mr. RITCHIE has promised. He has promised it in a way and in a speech which leave no doubt in the mind of any candid reader that he personally, and the Government as a whole, see no necessity for such an inquiry in any new facts that have been discovered. The real reason for it is in the democracy, and in the way in which the democracy is used with reference to such questions as vaccination. The rarity of small-pox, the large protection so far of anti-vaccinationists and their families by the very operation which they disparage make it easy for them to be misled and prejudiced against vaccination. And a thorough investigation may help to enlighten sensible working men. All we say is, the more thorough the investigation the better. We are not over-sanguine as to the result. Those who cannot see the overpowering argument in favour of vaccination in the common facts of every-day experience, in the diminished mortality from small-pox in the community generally since vaccination was established by law, in the further diminution of it since the vaccination of children was made compulsory, and in the practically absolute protection of revaccinated persons living in the poisoned atmosphere of small-pox hospitals, and who have no regard to the extreme slightness of any drawbacks to this amazing achievement, will not be readily convinced by a few more or less vivid illustrations or dogmatic conclusions of a new Royal Commission. Still, we approve what the Government has done. They that "will to Cupar, maun to Cupar." They who will insist on a certain sacrifice of infant life or a liberty to have small-pox themselves or to infect their neighbours with it, will be "of the same opinion still." But their unreasonableness will be more manifest to others, and the reputation of the country of JENNER for a fair amount of common sense will be maintained. We cannot admit the sagacity of Mr. PICTON in his crochety and Quixotic opposition to the Vaccination Laws. But we are not sorry that he has so far prevailed. He must have been painfully conscious that he had the worst of it in the admirable debate of the 5th inst. Sir LYON PLAYFAIR'S apt introduction of the fate of Leipsic, which, like Leicester, had relied for eighteen years on sanitary measures, with a mortality of only 29 deaths, and then had a great epidemic, with a mortality of 9600 per million of the general community, and no less than 30,000 per million of the infantile population below fifteen, should awaken misgivings in his mind. Mr. RITCHIE'S admirable speech, setting forth the absolute immunity of the revaccinated officials in the Sheffield Hospital and in the Post Office of Sheffield, when the disease was working such havoc among the unvaccinated, must have also proved unpalatable, including that part of it in which Mr. RITCHIE said he had been authorised by Mr. HUTCHINSON to say that, in answer to a question by Mr. PICTON in 1887, though he had for the past ten years been on the look-out for any case of the communication of syphilis by vaccination, he had not come across one, and that the officers of the Local Government Board had not found a case. Equally effective was Mr. RITCHIE'S exposure of the severity of the sequelæ of small-pox, and of the fallacy deliberately encouraged by Mr. PICTON, that the protection of Leicester is altogether independent of vaccination. We must not heap Pelion on Ossa in the shape of argument against prejudice, but will conclude with the hope that the Government will be exceedingly careful in their selection of persons to constitute the Commission. We entirely agree with Mr. PICTON and Dr. FARQUHARSON that there should be a legal and judicial element in the Commission—a judge for president—to secure that the evidence shall be real evidence; but with this qualification the Commission should be representative. By all means let the anti-vaccinationists be well represented; but at the same time they must not have all their own way.

We notice elsewhere the report of Dr. BARRY on the Sheffield epidemic, which deserves all the praise given to it by Mr. RITCHIE and others. One essential feature of such methods as Mr. PICTON advocates for the prevention of small-pox is a small-pox hospital for isolation. Dr. BARRY'S report proves, what had been shown before in the Fulham report, that such a hospital is a positive and deadly nuisance to those around it; and one of the questions which the Commission will have to face is the right of persons, or even a community, to concentrate a disease which they may easily avoid by congregating patients in small-pox hospitals, to the serious risk of those who live outside. We are in many respects only now at the very threshold of some of the most important questions of human liberty in civilised communities.

WHEN the invalid, who is forced to winter abroad, arrives at the month of March, his thoughts naturally begin to be occupied with the question of home-coming. The climate of his selected sanatorium, which may have proved highly beneficial during the winter, proves less and less suitable as spring advances. It becomes too hot in Algeria or in Cairo, and the melting of the snow at Davos and St. Moritz is the signal for a more or less general exodus of the winter colony of invalids. A direct return to Great Britain at the end of March or beginning of April, one of the most uncertain epochs of our uncertain climate, is not, as a rule, to be thought of, and no small difficulty commonly arises in choosing judiciously a suitable half-way house between the foreign winter sanatorium and the home country. The question is worth our attention, especially at this season.

The first point on which most practical authorities are agreed is that the invalid should be in no undue haste to

leave his winter resort until he has competent advice that further stay would be injurious. He should curb his impatience for change, and not mistake mere *ennui* for a genuine indication that a removal to other quarters is really indispensable on physical grounds. If the resort in which the winter has been spent has proved decidedly beneficial, there is the more reason for letting well alone, more especially as all over Europe spring is a hazardous time for much travelling on the part of the invalid. He is in most cases safer at his winter resort until the end of April or even the beginning of May. Then, however, the difficulty, although postponed, does actually arise. The cases group themselves into two categories: first, patients returning from high-altitude stations; and, secondly, those returning from the distinctly warm climates, such as Egypt, Algeria, Tunis, or Madeira.

The first type of patient has the advantage of having passed the winter in a cold bracing climate, and is hence more fitted to encounter the hazards of an English May than the invalid who has wintered in the dry heat of Egypt or the moist heat of Madeira. But the question of altitude comes in, and theory at least would suggest that he should spend some time at a station of medium elevation before returning altogether to the plains. Fortunately such stations are numerous, and present both natural attractions and adequate accommodation. From Davos Ragatz, Montreux, Vevey, or Bex can be reached, all of medium elevation; while from St. Moritz or Maloja resort may be had to Meran in the Tyrol or to Lugano in Italian Switzerland. It must be remembered that very few places in Europe have a really good spring climate, and that even in the most favoured districts the season is apt to be variable and disappointing, but the resorts we have mentioned are at least relatively good at this season.

The case of the invalid who has wintered south of the Mediterranean is somewhat different and more difficult. He has spent perhaps six months amidst practically continuous warmth, and is obviously unfitted to bear with impunity the cold blasts of the *mistral* or our own east wind. The difficulty arises from the radical change of climate involved in crossing the Mediterranean. South of the Great Sea winter is hardly known, and spring rapidly develops a heat exceeding the average of English summers; but on its northern shores spring is a doubtful quantity—often charming, sometimes much more treacherous and hurtful than the depth of winter. Hence, when the invalid crosses the Mediterranean, he must be thoroughly prepared for a radical change of climate, which if the season be propitious may involve no great risk, but may possibly be distinctly perilous. As the seasons are very commonly for long periods almost continuously either good or bad, the winter sojourner at Algiers or Tunis would find it to his advantage to ascertain beforehand the prevailing conditions at San Remo, Mentone, Hyères, Biarritz, Malaga, and other possible spring stations. If the Riviera has been favoured with an agreeable season it may be chosen, but there are years when it is certainly better avoided by those who have become habituated to the steady warmth and mild winds of the African continent. We do not now refer to the advantages of the Riviera as a continuous winter residence, which are considerable, but to its fitness as a temporary resort for invalids *en route* for home from places further south. Of the localities above enumerated, Malaga and Biarritz present very considerable advantages. The former is easy of access from Tunis, Algiers, or Tangier, and is a charming spot for a short stay, although somewhat wanting in that variety of attraction desirable for a lengthy residence. Biarritz is deservedly esteemed, its most serious drawback being a certain excess of wind. Those invalids who find this characteristic annoying or injurious may obtain immunity from it by a short journey to Archachon, which enjoys an unusual amount of local shelter. Pau is also fairly sheltered, but it is found too damp and depressing for many invalids.

Spring travelling is, as we have said, somewhat risky for those whose health is frail, and especially for sufferers from pulmonary disease. Ours is not the only country where at that season the brightness of the sunshine and the coldness of the winds constitute a conjunction of conditions apt to mislead the unwary and precipitate many an inflammatory attack. Just as many invalids do wonderfully in England until Christmas, so there are many that cannot safely return before June. It is better to spin out the autumn home-staying than to assent to a premature spring home-coming.

THE members of the Leeds Philosophical and Literary Society have been engaging in a discussion on the educational value of examination, but without arriving at any very definite result, for the discussion appears to have terminated without any vote or other articulate expression of opinion. This mode of debating, though unusual, is, in truth, not at all unsuitable to the subject and the present state of public knowledge and sentiment. The fact is that, although much has been said and written on this theme, very little has yet been done in the direction of bringing definite issues into view upon which a verdict can be taken. The discussion at Leeds, as elsewhere, took a form reminding one of those middle-age battles in which the warriors all came upon the field full panoplied in such effective armour that, although they fought all day, giving and receiving hard blows, nobody in the end was slain or even wounded. So it was quit possible for disputants on one side to point to the necessity of a test in the nature of an examination, and for disputants on the other side to urge the undeniable shortcomings of our existing system without ever coming within earshot of a contradiction. The real value of these discussions at the present time lies in the fact that they open the public mind to the appreciation of some very obvious truths, but truths which nevertheless have long escaped perception, and gradually prepare the way for those projects of educational reform which have yet to be formulated. The education of a child is a very complicated business, meaning in its fulness no less than the development of all those powers and capabilities which go to make a hale man and a good citizen. It need not be accounted strange if our new-found zeal in the cause of popular education should at first mislead us somewhat. Even misdirected energy which gives to the upgrowing generation an acquaintance with the world of books is not wholly thrown away, and we are therefore quite disposed to acquiesce provisionally in some delay in arriving at

a system of education which shall command our unqualified approval. In the meantime, we rejoice to find this subject exercising men's minds, even though it be by way of the most purely academic discussion. No more important subject challenges attention at the present time, and no more sacred trust is committed to the generation of to-day than the supervision of that process which has for its object the moulding and fashioning of the men and women whose brains and muscles are to furnish the humanity of the immediate future. Our own views on this great subject have been both recently and fully expressed. It is therefore the less necessary to recur to them just now. Suffice it to say that we strongly share the desire for an improved system of educational stimulants and educational tests, which seems to have been the prevailing sentiment at Leeds.

THE paper on the question "Does the Use of Alcohol Shorten Life?" by Mr. JAMES WHYTE, Secretary of the United Kingdom Alliance, has been called forth by the misrepresentations and misunderstandings of certain portions of the Collective Investigation Report on Habits of Intemperance. When the returns of the temperance inquiry were made up, it was found that the average age at death of the total abstainers reported on was remarkably low—lower, indeed, than that of any class of users of alcohol. Dr. ISAMBARD OWEN, who prepared the report, took some trouble to demonstrate the fallacy that would underlie a *primâ-facie* interpretation of this fact, which he showed to depend, in large degree at least, upon the comparative youthfulness of the teetotal body, and he summed up by saying that no comparison between the longevity of total abstainers and that of other classes could be obtained from the figures in question. By dint, however, of quoting the figures and omitting the equally important context, some spokesmen of the liquor-selling interest have claimed to assure the public "on medical authority" that total abstinence has been proved to be a practice highly detrimental to health, and that abstainers are a shorter-lived body of men even than habitual drunkards. The doctrine thus baldly presented is fortunately preposterous enough to defeat its own object, but none the less is it well that its falsity should be pointed out in detail, as Mr. WHYTE has done in the opening pages of the pamphlet before us. Mr. WHYTE, however, does not merely stand on the defensive; he has carried the war energetically into the enemy's camp, and compiled from the published statistics of insurance and friendly societies a formidable body of evidence in favour of the superior healthfulness of abstainers as compared with the non-abstaining general public. These statistics are not now presented for the first time, but they are placed before the reader in a very cogent manner, and are well worth the attention of every practising medical man whose daily responsibility it may be to advise his patients as to the use or disuse of alcoholic liquors. We will not go so far as to say that they are sufficient to settle the whole question of abstinence *versus* alcohol. The comparison they enable us to make is between the death-rate of teetotalers and that of a somewhat miscellaneous class of drinkers; but the exact effect upon health, for good or for ill, of such small daily quantities of alcohol as Dr. PARKES, for instance, regarded as non-toxic, we have no present means of gauging. The question, perhaps, is one of more importance to pure pathology than to medical practice. Enough evidence is before us to convince any reasonable man that the detriment to health, if any, produced by abstinence from alcohol is minute in comparison with that due to even moderate excess in its use, and that the cases are exceptional in which the practical physician need insist on alcoholic liquors as an article of general diet, or hesitate to recommend the disuse of them, if on other than medical grounds it should seem advisable to do so.

Annotations.

"Ne quid nimis."

THE HEALTH OF THE COUNTY OF LONDON.

THE low and continuously declining death-rate in the County of London is one of the most hopeful features of recent mortality statistics in England. The death-rate in London in 1888 corresponded to 18·5 per 1000 of the estimated population, and was 2·5 below the mean rate in the preceding ten years. The Registrar-General notes in his Annual Summary, just issued, that "this is by far the lowest death-rate as yet recorded in London, and, moreover, the three next lowest are those in the three immediately preceding years, 1885–6–7, when the figures were successively 19·8, 19·9, and 19·6." Thus the recorded death-rate in that huge urban aggregation embraced by the newly constituted County of London has during the last four years scarcely exceeded the death-rate in the whole of England and Wales. This low mean death-rate in the metropolitan county should be borne in mind in connexion with the fact that the death-rate during last year in the various sanitary areas into which London is divided for administrative purposes ranged from 12·7 in Hampstead, 13·8 in Plumstead, and 14·8 in Kensington, to 25·0 in Stepney, 25·5 in St. Olave Southwark, 25·9 in St. Saviour Southwark, 26·4 in Holborn, and 27·8 in St. George-in-the-East. Bearing in mind this wide range of death-rates in the London districts, it is impossible to avoid the conclusion that the advent of more earnest and vigorous sanitary administration, which it may be hoped will be promoted by the London County Council, will necessarily result in the still further reduction of the metropolitan death-rate. The year 1889 has opened auspiciously as regards our mortality statistics. The death-rate of our large towns has been lower during the first quarter of this year than in any previous corresponding period, and that in London has been relatively as well as actually lower than that in the largest provincial towns. During the thirteen weeks ending on Saturday, March 30th, the London death-rate did not exceed 19·5 per 1000, and was 3·9 below the mean rate in the ten preceding corresponding periods; whereas in the twenty-seven large provincial towns dealt with in the Registrar-General's weekly return the mean death-rate last quarter was 22·1 per 1000, and exceeded the London rate by 2·6 per 1000. Notwithstanding the continued epidemic prevalence of measles, the aggregate zymotic mortality during last quarter in London was considerably below the average, and the mortality from whooping-cough, scarlet fever, and enteric fever was remarkably low. The solution of the problem how far high death-rates are inseparably connected with urban aggregation has now been committed to the trust of the London County Council, and we shall be disappointed to find that the metropolitan death-rate has yet nearly reached its lowest level.

THE LONDON HOSPITALS AND THE WORKING CLASSES.

THE Lord Mayor is acting very earnestly and energetically in support of the scheme for raising £100,000 from the working classes, and received almost a royal reception in the East-end, where a meeting was held under his presidency in the Great Assembly Hall. The Volunteers, the Foresters, the Sons of Phœnix, the Druids, the Loyal Standard Friends, the representatives of the Shipwrights, Coopers, Stevedores, Bow Railway Works, East London Soap Works, and of other large firms and societies, all united to do honour to the Lord Mayor and the movement he represented. Lord Meath plainly told the meeting that if something effective is not done by the working classes the hospitals will have to be supported out of the rates. He moved a resolution, which was carried, that there should be in every workshop or warehouse a contribution from each worker of 1*d.* or ½*d.* a week towards the support of hospitals. The Lord Mayor suggested that the average weekly contribution of each workman should be 1*d.*, and of every workshop, per annum, £3 10*s.*, which would give a grand total of £100,000. We heartily wish the movement success. Nothing can be better for the initiation and impetus of the movement than the action of the Lord Mayor. But of course that will not produce the £100,000. This can only be gathered by a highly organised system of collection—if possible, by getting *employés* to consent, as is done in some towns, to the subtraction of 1*d.* a week from the wages. It should be clearly understood at the outset that such contributions shall not in any way alter the character of hospitals as great charitable institutions for the treatment only of severe cases, and must leave the ordinary medical attendance of the working classes to be arranged for in private ways. Another manifesto with regard to the arrangements for medical attendance on the working classes has been issued this week in the form of a letter signed "Westminster, C. G. Bradley, T. Spencer Wells, W. Bousfield, F. D. Mocatta," commending the Metropolitan Provident Medical Association. This Association contemplates provision for the ordinary medical attendance on the working classes on provident principles. We do not care how a working man arranges for the ordinary medical wants of his family, so long as he does so with due respect to himself and the medical profession. He should not take his medicine and all the care of a doctor for nothing. What is more, he should pay his doctor as well as he can, and treat him as an educated man to be relied on in the emergencies of life and death. No class needs kindly and prompt medical attention more than those whose health is their capital, and they should refuse and suspect all medical service for which they do not pay as they pay for bread, beer, and clothing.

FLOGGING FOR ARMED BURGLARS.

No legislative measure, however beneficial its effect, can be expected to pass without some risk of opposition. Objections from some quarter or other are almost inevitable, and are, we may say, a natural property of any procedure that wears the look of thorough-going resolution. Lord Milltown's Bill, providing for the infliction of corporal punishment on armed burglars, is no exception to this rule. It has had to run the gauntlet of influential censure. Happily, in the interest of public safety, it has passed the ordeal in the Upper House with a substantial majority of three to one in its favour, and will enter on the second stage of its development in the House of Commons under promising conditions. We find it difficult to understand on what rational grounds this proposed addition to the law can be opposed. Inefficiency can hardly be alleged as an objection. The penalty which the new rule would impose has already been frequently exacted in cases of garotting, and certainly not without good proof of its deterrent influence. If, on the other hand, its justice be disputed on humanitarian grounds, there is obviously less of sense than of sentiment in the contention. The moderate rigour with which it visits the rough manners of the street bully represents an argument to which he is rarely indifferent, and the supposed degrading effect on a deeper, more delicate sense of self-respect is at least highly dubious. Why, then, should acts of licence identical in kind but of aggravated character be excused from treatment by the same wholesome remedy? The great majority of criminals guilty of such offences are certainly not physically disqualified from receiving a somewhat liberal allowance of the lash. Some persons would doubtless prefer methods which at first sight appear more dignified or more merciful, such as imprisonment for a certain term. Others would even go so far as to forbid the use of any stronger pressure than that of moral suasion. Such measures are excellent in their own place, but they cannot of course absorb all attention from the more practical teaching of experience. This, we have seen, affords ground for belief that the action of these more gradual processes as means for the protection of life and property would be greatly assisted by a more direct appeal to the senses of the housebreaking desperado.

THE CHOLERA PANIC IN FLORENCE.

A FLORENTINE CORRESPONDENT, under date April 5th, writes:—"The Town Council, alarmed at the deterrent effect which the outbreak of suspiciously choleraic symptoms at the Bonifazio and Santa Lucia Hospitals was having on the foreign arrivals, telegraphed to the Reuter and Havas agencies that cholera was absolutely non-existent in the cases attacked, and that the health of the city was all that could be desired. Having thus attempted to allay apprehension abroad, the Town Council administered a calmative at home in the shape of the official report of the commission of inquiry into the outbreak in question. Premising that the symptoms were manifested in 'more than a hundred' inmates of the two hospitals, and that the nature of these symptoms was greatly misrepresented, the commission proceeds to aver, 'sul suo onore,' (1) that the intestinal disturbances that declared themselves on the night of March 21st–22nd were not in the nature of cholera, nor to be attributed to any infective principle whatever, but solely to substances consumed by the patients affected during the day of the 21st; (2) that of those patients one only (a man of more than eighty years of age, labouring under apoplectic hemiplegia) could be suspected of having died from the visceral shock above indicated; (3) that all the patients had completely recovered from the effects of those visceral derangements; and (4) that the rumours as to the infective or epidemico-contagious nature of the intestinal disturbances that were manifested at the places and at the time referred to were therefore without foundation. This is satisfactory so far as it goes; Drs. Nesti and Bargioni, and the Advocate Signor Carpi, who, as commissioners, sign the report, being professional authorities of well-known competence and integrity. But it would have been more satisfactory still if they had frankly informed the public as to the substances 'consumed on the 21st,' which gave rise to so sudden, so violent, and so widespread an explosion of diarrhœa. That abuses exist in the management of Italian hospitals is asserted by those who have the best means of knowing the truth, and King Humbert himself, on his visit to Florence two years ago, commented severely on the negligence, untidiness, and general inefficiency of the service vouchsafed the inmates of the hospitals inspected by his Majesty. Rightly or

wrongly, the impression has gone abroad that meat which ought to have been prohibited from the market as unfit for human consumption, was supplied to the patients, with the serious consequences that ensued; and, in these circumstances, it was the duty of the Commission, armed as it was with full powers, to have sifted the matter to the bottom. The Neapolitan 'Consiglio Communale,' as reported in THE LANCET of Jan. 19th, actually complimented its chief civic authority for having kept secret the fact that cholera was widely prevalent in Naples during 1887, and for thus having saved the city from the loss which the scaring away of its foreign visitors would have occasioned! It would be a pity if Florence, frequented by so many thousands of our compatriots annually, were to lay herself under the suspicion of such ostrich-like policy in matters of hygiene as that of her more backward southern sister."

ŒDEMA AS A DIAGNOSTIC SIGN IN CARCINOMA OF THE STOMACH.

M. C. BAERT, of Brussels, writing in *La Clinique* on cancer of the stomach, calls attention to the frequency with which œdema of the ankles is met with in this affection after it has lasted a few months—a diagnostic aid which is by no means new, but is, he thinks, in danger of being too much overlooked at the present day. He gives a number of cases recently occurring in the various hospitals in Brussels in which œdema was present. In one of these cases the œdema came on as early as three months after the first symptoms of the affection made their appearance; in two other cases it was noticed after four months; but in most of the other instances it was delayed till the lapse of from six months to a year after the onset. In one case, where there was no evident cause to which to attribute the loss of appetite and the wasting complained of by the patient, Professor Carpentier, noticing some œdema of the ankle, diagnosed carcinoma of the stomach, and found his diagnosis confirmed by the appearance a month afterwards of all the usual signs of the affection. Several of the cases presented a marked increase in the nitrogen excreted in the urine. With regard to the deficiency or absence of hydrochloric acid in the stomach in cancer of that organ, M. Baert admits that it is usual, but agrees with Wolff and Ewald in saying that this sign is by no means peculiar to cancer, as it is found in other gastric affections.

HOSPITAL NURSES.

IN some respects the display of *any* interest in the arrangements or the management of the large London hospitals may be welcomed. It is so far an advance upon the general spirit of apathy that an occasional burst of adverse criticism is perhaps likely to work for good, even when it is based upon an exaggerated or distorted view of the truth. On these grounds we note with a certain satisfaction that there is a growing idea that the nursing arrangements are far from perfect. Within the past week the cause of the nurses has found champions in two of our daily papers, both eager to promote reform, and both basing the need for reform upon the ground of overwork. One urges that in place of day and night nurses, three sets should be employed, the change of duty being made at 7 A.M., at 3 P.M., and at 11 P.M. Although this suggestion comes from one who professes to know, it is perfectly obvious that a change at 3 P.M. would be very difficult to effect. It would, in most hospitals, lead to confusion at the very time when the members of the visiting staff are going round the wards. The tone of the other article may be gathered from its heading, "White Slavery in Hospitals," as well as from its description of hospital nurses as "young and self-denying women who desire to devote their lives to the amelioration of human suffering." A highly-coloured picture is drawn of the routine of a nurse's life, with the general idea that it is characterised by work and "hurry-scurry" from seven in the morning until nine at night, with very insufficient time for meals or for out-door exercise. Doubtless the system of hospital nursing is frequently defective, especially if the routine is disturbed by the morning visits of the resident officers being commenced too late or continued too long. The most potent cause of the "break down" which occasionally occurs appears to be the frequent training of nurses at too early an age. In spite of carefully devised regulations, it is notorious that exceptions are often made, and they not uncommonly lead to disastrous results. The whole question is, however, of such importance that we propose reverting to it at an early date.

PARKES TRIENNIAL PRIZE.

BY the courtesy of Sir Thomas Longmore, the President of the Parkes Memorial Fund Committee, we are enabled to announce that the prize of £100 and a gold medal for the best essay on the "Etiology and Prevention of Yellow Fever" has just been awarded to Surgeon R. H. Firth, F.R.C.S.Eng., Medical Staff, now doing duty at the Station Hospital, Jullundur, in the Punjab. The assessors appointed to adjudge the prize were Surgeon-General Maclean, C.B., LL.D.; Inspector-General Macdonald, R.N., F.R.S.; and Deputy Surgeon-General Veale, M.S. The essays sent in were nine in number, and the assessors report favourably of them generally, but more particularly of one, only second in merit, bearing the motto "Dignus vindice nodus." The essays will be returned to the writers on application to the secretary, Parkes Memorial Fund, Royal Victoria Hospital, Netley. The subject for the next prize is "The Influence of Soil as a Factor in the Production of Disease, especially in Hot Climates," and the essays must be sent in on or before Dec. 31st, 1891. The competition is open to all medical officers of the Army, Navy, and Indian Services of executive rank on full pay, with the exception of the assistant professors of the Army Medical School during their term of office.

DREAMS, SLEEP, AND CONSCIOUSNESS.

THE commonest experiences of every-day life are frequently those which are most interesting to study, and they are also in many instances those which most successfully elude the grasp of scientific precision. Medical musers of all ages have pondered over the mystery of dreams and sleep, without getting much further than speculations of a very personal nature. This personal element is inevitable, since experience shows that in every account of a dream there are awkward lacunæ where the inventive faculty is brought into play. There is a modest hesitation in the waking state about recounting in consecutive form the disconnected particles which have formed the component parts of the dream, and the result is that ordinarily a veil is woven to hide the defects of memory, or sundry adventitious links are inserted to give a logical sequence to what is most illogical. Individuals do not believe sufficiently in the accuracy of their own accounts to trust those narrated by others. Dreamers of dreams in the past ordinarily foretold their own successes, and thus accustomed their hearers to unfamiliar ideas; more recently a novelist has confessed to having worked up much of the perilous stuff that dreams are made of into literary form, and to have reaped much advantage from this assistance. The latest publication which reaches us from Dr. George M. Gould proposes a more serious task, for it is no less than an attempt to study the nature of con-

sciousness, and of its origin from the facts of sleep and dreams. The difference between the dreaming and the waking consciousness is assumed to be the absence of all stimuli in the latter condition, while all the subordinate centres are functionless. The dreaming consciousness is supposed to be on the alert to watch over the sleeping organism. "When sleep is permitted, it is because it is safe to permit it. Hence sleep may at first be dreamless with less danger to the organism." Although there is much that is extremely interesting in this paper, the conclusions arrived at are somewhat startling. It may be hesitatingly conceded that "dream-personality has no individuality"; but many will demur at the notion that "through physiological psychology we catch a glimpse of the profound truth that, at heart, we are all the same"; while to say that "dream-philosophy teaches religion and sympathy" is to challenge contradiction. Dr. Gould's views are no less novel than striking, and his language often has a poetical turn mingled with scientific phraseology that is entertaining; for example, in his concluding words upon dream-consciousness he says, "its phantasmal existence is upborne upon the ghostly wings of past sorrows and joys, and tied to reality by the tenuous thread of a momentarily interrupted sensation."

MR. STANLEY ON ARROW POISON.

THE letter from Mr. H. M. Stanley, which was read at the meeting of the Royal Geographical Society on Monday last, contained an extremely interesting reference to the arrow poison employed by the natives of the Lower Congo district, and it afforded a curious insight into the strange perversions of knowledge by which the advances of civilisation are retarded. Mr. Stanley says they were much exercised as to what might be the poison on the heads of the arrows by which Lieutenant Stairs and several others were wounded, and from the effects of which four persons died almost directly. The mystery was solved by finding at Arisibba several packets of dried red ants. The bodies of these insects were dried, ground into powder, cooked in palm oil, and smeared on the points of arrows. It is well known that formic acid exists in the free state in red ants, as well as in stinging nettles, and in several species of caterpillars. This acid is, in the pure state, so corrosive that it produces blisters on the skin, and hence there is little ground for doubting that it was the "deadly irritant by which so many men had been lost with such terrible suffering." The multitude of curious insects encountered, which rendered their lives "as miserable as they could well be," bears out Mr. Stanley's idea that many similar poisons could be prepared from insects. It certainly is strange that, with the exception of cantharides, and perhaps of blatta orientalis, the insect world is so little used for active therapeutics.

JUVENILE VAGRANCY.

IT would be impossible by means of any law or code of laws to eradicate those habits of idleness, unthriftiness, and vice which are accountable, singly or in conjunction, for what we call vagrancy. The roots of this ancient evil are at all events too deeply fixed to be reached by such measures as are merely of a repressive character. There is not even any great encouragement to hope that in the case of old offenders the power of education can do much to assist the law in its remedial work. With children it is otherwise, and this fact we are pleased to see has been duly appreciated by modern legislators, and has given a fresh direction to their reforming energies. The Bill for the Better Prevention of Cruelty to Children now before the House of Commons deals with this important subject. It seeks by rendering penal the practice of begging, or virtual begging under cover of street singing and the like, to prevent all children under ten years of age from earning idle pence in behoof of parents or pretended parents. With others, up to fourteen years in the case of boys, sixteen in that of girls, it deals rather less strictly, but forbids them to practise mendicancy in streets or public-houses during the night and evening. Children offending against the statute are liable to committal, though the parents are still chargeable for their maintenance. Industrial schools afford a ready and useful means for their further disposal. In anticipation of this Bill, the Society for Prevention of Cruelty to Children have undertaken to provide for the care and training of any young street waifs who may require their help, an arrangement which does great credit to the public spirit of the Society. Such efforts, in which the power of law is at once aided and modified by that of voluntary benevolence, illustrate a most hopeful phase in social reform. We may reasonably expect that their continued joint operation will tend to a gradual reduction in the numbers of our far too numerous vagrant population, and will strike at the root of that cruel imposture by which even infants in arms are used by sturdy beggars as the helpless catch-pennies of idle poverty.

PHYSICAL TRAINING IN SCHOOLS.

SCHOOL BOARDS have not hitherto been credited with any remarkable zeal for physical education. It is true that they have not disputed the abstract value of such training. On the contrary, they may be said to have extended to it in their official position a certain amount of negative encouragement. As the custodians of playgrounds and apparatus provided for the children, they have necessarily maintained and advocated the use of these means of recreation. This perhaps is enough to constitute official interest in the matter, and yet there is ample scope for the enterprise of any who seek to supplement such needful provisions by introducing further desirable reforms. It is therefore satisfactory to note as a healthy and hopeful proof of awakened concern on the part of school authorities, that a regular course of instruction in the theory of physical education has been arranged for the benefit of teachers. The syllabus of an examination lately conducted under the new arrangement has been forwarded to us, and, if we may judge from the character of the question paper, the course appears to be regulated by rational and practical considerations. The introduction of system into such a matter is certainly conducive to the well-being both of teachers and children. Care must of course be taken that this gymnastic drill is not overdone. A liberal allowance of free play will always be necessary, or exercise will only become a form of task-work. A little judgment in arranging time for recreation should prevent any such abuse of what all must allow to be a wholesome innovation.

THE DIFFUSION OF SMALL-POX.

IN an interesting annual report, Dr. M. T. Sadler discusses the subject of hospital provision in its several bearings, and he is able to show that much good has been done by isolation in Barnsley. Coming to the question of small-pox isolation, he says that the danger, whatever it may be, is entirely confined to those who, living near the hospital, and in a time of epidemic, refuse or neglect to avail themselves of the protection given by vaccination. Several comments occur to us on this statement. In the first place, those "living near" to a small-pox hospital have more than once been shown to include the many thousands who happen to live within an area of at least a mile radius of such an institution. In the next place, the epidemic diffusion has itself been the result of the removal of patients to such a hospital, when prior to such transportation the

district around the institution has been free from small-pox; and even the aggregation of a comparatively small number of small-pox patients in hospital has led to such epidemic extension. And, lastly, what is true as to the capability of the inhabitants around a hospital to protect themselves against this danger by resort to vaccination is just as true as regards the inhabitants living near the separate houses where the disease occurs; indeed, the argument goes to show, not that one part of the community ought to protect itself against small-pox for the convenience of the remainder who are not so inclined, but that small-pox hospitals ought to be altogether unnecessary. The Barnsley corporation are, however, building a small-pox hospital on the lines indicated by the Royal Commission on Small-pox and Fever Hospitals—namely, one in which all out-going air is submitted to a process which shall "reduce within the smallest limits the chance of spreading infection." We shall look with interest to this attempt to prevent a recurrence of the disastrous results which are known to have occurred around so many small-pox hospitals, and notably around those at Fulham and at Sheffield.

ARTERIAL CHANGES IN PHTHISIS.

THE morbid changes in the arterial coats have recently been studied in sixteen cases of phthisis by Dr. N. Sh. Ippa of St. Petersburg. In all the cases some at least of the arteries were affected, the coronaries of the heart invariably so. The coats which were found to have undergone morbid change were the intima and the middle coat. Connective tissue was found in the intima of arteries where it does not in the normal condition exist at all—as for example in the brachial, femoral, and coronary arteries. This is due to an inflammation of the coat, which has been described by Dr. R. Thoma as "diffused and nodose chronic fibrous endarteritis." In arteries where there is connective tissue in the intima, its amount was found to be very materially increased. The middle coat was affected in a somewhat similar manner, the muscular elements being atrophied and connective tissue being formed. The vessels presenting the most extensive morbid changes were the coronaries, and those least affected were the brachial, femoral, and more particularly the pulmonary arteries.

BANKRUPTCY AND LIFE ASSURANCE.

THE policy of compelling a bankrupt to assist to the full extent of his ability in the realisation of his estate for the benefit of creditors has been only very imperfectly carried out in our existing law. No doubt there are great difficulties in the way of effectually doing this. The ingenuity of bankrupts is commonly directed to the evasion of what must at best be a very distasteful task, and the wise tenderness of English law on all points which touch individual liberty often gives him ample room for the exercise of such ingenuity. It may well be doubted whether in some respects this liberty might not be usefully and reasonably restrained. For example, it is accepted doctrine that a bankrupt cannot be compelled to submit to medical examination for the purpose of life assurance in the interest of his creditors. It has not unfrequently happened that an estate, consisting principally, perhaps exclusively, of a reversionary interest, has in this way been placed at the bankrupt's mercy, who might, by a mere refusal to submit to examination, depreciate his property enormously. The case actually arose only the other day, and although the law of it was perfectly well settled, the wrong was flagrant. If life assurance were an unfamiliar form of contract this absence of power to compel a debtor to take the only righteous course would be intelligible; but, being the common and every-day transaction that it is, it might surely be taken to have imposed upon the Englishman of to-day a duty which, if new in form, is only common honesty in substance, and should be recognised as such even by the most fastidious tribunal in the world.

THE USE OF ANODYNES.

TO the eye of prejudice every attempt to escape from pain appears to be sinful. The employment of anæsthetics during parturition has been occasionally denounced from the pulpit upon scriptural grounds, although it may be doubted whether a similar line of argument has ever induced a cleric to refuse the offer of "gas" made to him by a dentist. The lengths to which prejudice can go when backed by ignorance are well illustrated in the case of "exalgine," the new anodyne introduced by Dujardin-Beaumetz, and Bardet. Our readers may remember that our Paris correspondent recently sent us an account of this drug, from which it appeared that it was a methyl derivative of acetanilide, and that it was possessed of remarkable analgesic properties, particularly valuable in cases of neuralgia. Already this new drug has fallen under the ban of detractors in the lay press. It has been asserted that exalgine is merely a new name for morphine, chosen for euphemistic purposes. According to another view, it will "probably be a cunning combination of all other noxious concoctions," and will play an important part as a popular substitute for ether, hashish, opium, and similar medicaments in the treatment of "feverish languor, lassitude, and lowness of spirits." In view of such random assumptions it may be worth mentioning once more that its chemical composition is expressed by the name ortho-methyl-acetanilide, while Dujardin-Beaumetz and Bardet at present only lay stress upon its antineuralgic properties, without claiming for exalgine the position of a popular panacea, deliriant or narcotic.

PUBLIC v. PRIVATE VACCINATION.

THERE is an unreasonable tendency in certain quarters to draw invidious comparisons between vaccination by public vaccinators and vaccination by private practitioners to the detriment of the latter. In a letter lately read to the Chorlton guardians from the Local Government Board, and returning certificates of insusceptibility to vaccination, the Board observe that not one of twenty-seven such certificates was given by a public vaccinator. The attention of the guardians is drawn to page 7 of the annual report for 1881, "where it is shown that vaccination by public vaccinators is of a more efficient character than that which is performed privately," and it is suggested that the guardians should "induce the parents of the children in question to take their children to the public station for the district in which they live." The Board point out that a certificate of insusceptibility is not to be given till after *three* unsuccessful attempts at vaccination—not two. We entirely agree with Dr. Rhodes and Dr. Rains in resenting this action of the Local Government Board. It is no part of their duty to disparage vaccination by private practitioners, and it is as unwise as it is uncalled for. There are good vaccinators and bad both in public and in private practice. But the law wisely leaves people to have their vaccination done anywhere and by whom they please, so long as it is done. We are no apologists for careless or imperfect vaccination, or for making one insertion to please the parent instead of four to save the child; and if there are practitioners who do such vaccinations, we hope they will understand that they are acting unfaithfully to their duty. But it is a monstrous suggestion that private practitioners are to be disqualified at the nod of the Local Government Board. We are very much surprised to see such views as

are expressed in the letter of the Board advocated in the March number of the *Bristol Medico-Chirurgical Journal*. By all means let inefficient vaccination be denounced, but let it not be assumed that there is any monopoly of knowledge or skill in public vaccinators.

DR. STERNBERG'S INVESTIGATIONS IN YELLOW FEVER.

IN a paper entitled "Hunting Yellow Fever Germs," read before the Quarantine Conference at Montgomery, Ala., on March 5th (*Medical News*, March 10th), Dr. Sternberg describes his researches made in Havana and in Florida last year. He failed to find any micro-organisms in the blood of yellow fever patients either during life or after death. Occasionally in the liver and kidney he met with some organisms, particularly a bacillus resembling that found by Emmerich in cholera. But the infrequency of its occurrence and the failure to isolate it convinced him of its non-pathogenic character, and suggested a post-mortem invasion of the tissues concerned. Accordingly he proceeded to examine the alimentary canal, on the view that the disease is due to a ptomaine generated by organisms therein, as appears to be the case in cholera. With this object he examined bacteriologically the excreta of thirty-nine cases of yellow fever, isolating a variety of micro-organisms, of which possibly, he says, one may be the long-sought germ. Some of the bacilli liquefied gelatine, others did not. One very constant form was obtained also from another source, and therefore could not be the yellow fever bacillus. He only isolated Gibier's bacillus in three cases, and his experiments, although showing it to have interesting pathogenic properties, did not suggest the view of its being the specific germ of yellow fever. He never observed the production of black pigment in the cultures of this bacillus as noted by Gibier, and he held to be untenable the view advanced by Freire as well as by Gibier, that the "black vomit" is due to such special pigment. Dr. Sternberg, on the other hand, is satisfied of the truth of the generally accepted explanation, that the pigment in black vomit is due to altered blood.

ADDISON'S DISEASE.

AT a recent meeting of the Montpellier Academy of Science (*Gaz. Hebd. des Sci. Méd.*, No. 11), M. Baumel related two cases of Addison's disease. The first, observed in 1880, was that of a man thirty-six years of age, who had spinal curvature, and in whom the bronzing consisted in an increase of the normal cutaneous pigmentation. The second, observed in 1888, was that of a woman sixty-five years old, who exhibited marked bronzing all over the trunk, but the face, hands, and feet were exempt. In the first case, there was considerable enlargement of the suprarenal capsules and numerous foci of caseation. In the second, the capsules were atrophied and in a state of fatty degeneration, which occurred in other of the abdominal viscera. The change in the capsules was especially marked in one of the two zones of pigmented cells separating the medullary from the cortical substance, and a cavity formed here by the degeneration was the seat of a hæmorrhagic effusion. M. Baumel expressed his belief in a chromatic nervous apparatus, and in the function of the adrenals being to supply the material for pigment, in the form of the chemical body discovered by Vulpian. This substance, which reddens in contact with air and blackens with the persalts of iron, would, after contributing perhaps to the formation of hæmoglobin, go to form a pigment in the cellular elements. In connexion with this subject, it may be added that at the meeting of the Paris Academy of Medicine on the 26th ult. M. Cornil read the report of a committee, consisting of MM. Jaccoud, Constantin Paul, and himself, on a case of Addison's disease with lesions of the posterior spinal nerve roots, communicated to the Academy by MM. Kalindero and Babes. These observers found in this case a chronic sclerosis of the cord mainly confined to the vicinity of these nerve roots, with a neuritis extending specially along the latter, the lesions being most marked in the lower dorsal region. The committee reported that no general conclusion could be drawn from a single fact, but considered this observation to meet the desideratum expressed by M. Jaccoud in his Dictionary—viz., that hitherto no anatomical lesion characteristic of Addison's disease had been found.

RUSSIAN MEDICAL DISSERTATIONS.

A LIST or catalogue of the dissertations presented to the Russian universities and the Medical Academy of St. Petersburg, which takes the place of a university medical faculty and grants degrees, has just been compiled and published by M. Petroff, of the Medico-Chirurgical Library, St. Petersburg. The catalogue includes also dissertations referring to veterinary science. It is divided into headings according to subjects, and includes dissertations dating from 1860–80. Unfortunately, it is all, except the title page, in the Russian language, and does not apparently include the Dorpat dissertations (which would be in German), or those of Warsaw or Helsingfors (which would be in Polish and Swedish respectively). Still, as suggested in our article on the subject of Feb. 16th, there is no difficulty whatever in obtaining assistance in London to unearth the rich mine of material which is referred to in the catalogue.

THE CHARGE OF PROCURING ABORTION AT LIÈGE.

THE charge against Dr. Smeets of procuring abortion at Liège—which has caused a great deal of sensation in the medical world of Belgium, and even of France, in consequence of the action of the hospital medical officers who were in the first instance the means of causing the prosecution to be instituted, but who seem to have been misled by some confession made by the dying woman, and by what is said to have been a not very skilfully conducted post-mortem examination—has at last, after being dragged from court to court, been finally settled by the complete exoneration of the accused. On arriving in Liège he received quite an ovation, and the newspapers have been full of congratulations, as he is one of the most popular practitioners in the city.

CASE OF ANCHYLOSTOMIASIS IN QUEENSLAND.

THE first case of fatal anæmia due to the anchylostomum duodenale that has been recorded in Australia is given by Mr. J. B. Hogg, of the Woogaro Lunatic Asylum, Gudna, in the February issue of the *Australasian Medical Gazette*. The patient, a labourer, a native of Denmark, had been an inmate of the asylum since 1878 suffering from mania which gradually passed into chronic dementia. He was very dirty in his habits, and was continually swallowing stones and other foreign bodies. Possibly the parasite gained entrance through this practice. In June, 1885, his feet and ankles were œdematous, but this symptom passed away, to recur six months later with a trace of albuminuria. He recovered in March, 1886; but in October, 1888, began to be very anæmic and dropsical. The urine was of low specific gravity and contained albumen. The anæmia and anasarca increased until death, which took place in the following December. On post-mortem examination, beyond pallor and dropsy the viscera were healthy, but in the duodenum and upper jejunum were thirty or forty minute worms, each about one-third of an inch long,

adherent by one extremity to the mucous membrane, and when detached leaving small bleeding points. Under the microscope they were identified as male and female specimens of the anchylostomum, the latter containing embryos. Mr. Hogg remarks that the parasite was discovered in Northern Italy in 1838, and has since been found in France, Holland, Germany, Comoro Islands, Cayenne, Jamaica, Java, Egypt, and Brazil. It is of interest to find it occurring in Australia, and the fact that the patient had been seven years an asylum inmate before any symptoms arose shows that the worm is more universally distributed over the globe than has been thought. Again, the circumstances of this case, as well as the observations of anchylostomiasis elsewhere, suggest an inquiry into the prevalence of the disease among geophagous races.

REFORM AT THE ROYAL COLLEGE OF SURGEONS.

IT will be seen from the full text of the Draft Bill to Amend the Constitution of the Royal College of Surgeons, which we publish in another part of our impression, that the Parliamentary Committee has very considerably cut down the text, omitting all points of mere detail and the preamble. It will, we think, be admitted that in taking this course they have exercised a wise discretion, and that the little Bill which is shortly to be introduced into the House will stand a much better chance of becoming law than the much more complex document which it has replaced.

MANDAMUS AGAINST A DEFAULTING SANITARY AUTHORITY.

AFTER four years' delay in the matter of providing their district with a proper system of sewers, the Local Board of Health for Sutton, in Surrey, have got no further than to say that they were again going to ask some engineers to design a scheme. Under these circumstances, the Local Government Board, after making inquiry under Section 299 of the Public Health Act, 1875, have applied to the Court of Queen's Bench for a rule *nisi* for a *mandamus* to compel the Local Board to do their duty in this matter. The application having been heard by the Lord Chief Justice and Mr. Justice Charles, a rule *nisi* was granted.

VON ESMARCH ON THE DISINFECTING ACTION OF STEAM.

ACCORDING to some new researches made by von Esmarch on the action of steam as a disinfectant, it would appear that the effects in relation to the destruction of bacteria depend not so much upon the temperature as upon the degree of saturation of the steam. If there is air with it, the power of destroying organic germs is very much diminished. Thus, in experimenting on the spores of malignant pustule, von Esmarch found that, while superheated steam which was not in a condition of saturation at a temperature of 120°C. was unable to destroy the spores in half an hour, saturated steam at 100°C. destroyed them in from five to ten minutes.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

AT the Committee meeting of the above Association, held on the 9th inst., the abridged Draft Bill (printed in another column) was submitted for consideration and received. It was announced that Mr. John Tweedy had consented to become a candidate at the next election, to be held in July, of members of the Council of the Royal College of Surgeons. It was also stated that Mr. C. Steele of Bristol will probably be a provincial candidate at the same election.

ASSISTANT INSPECTOR UNDER THE "CRUELTY TO ANIMALS ACT, 1876."

DR. GEORGE VIVIAN POORE, F.R.C.P., Professor of Forensic Medicine at University College, and one of the physicians of University College Hospital, has been offered by the Home Secretary, and has accepted, the appointment of "Assistant Inspector" under the so-called "Vivisection Act." Dr. Poore's duties will consist in visiting and inspecting from time to time all places registered under the Act "for the purpose," to use the words of the Act, "of securing a compliance with the provisions of this Act." It would have been difficult to find a gentleman better fitted in all ways for these delicate and responsible duties than Dr. Poore. The office of "Inspector," or rather of chief adviser to the Home Secretary under the Act, will still continue to be held by Mr. Erichsen.

MEASLES AT PLUMSTEAD.

PLUMSTEAD has been suffering severely from an epidemic of measles. According to the report of the medical officer, Mr. Wise, this has been the most fatal visitation of recent years, more than twenty children having died from measles or the sequelæ of measles during the last month. The actual cause of death in nearly all cases is returned as bronchitis or "congestion" of the lungs following measles. The epidemic appears to be travelling westward, and Mr. Wise has recommended that the public elementary schools shall be closed for three weeks. Of course no one has power to order the closing of Sunday schools, and it is feared that if these be not voluntarily closed by those in charge of them much of the advantage of closing the day schools will be lost. The total number of children who are at the present time reported as absent from elementary schools on account of measles in Plumstead is no less than 782. It is somewhat remarkable that, so far, Woolwich, which is contiguous to Plumstead, has scarcely suffered at all.

FOREIGN UNIVERSITY INTELLIGENCE.

Bonn.—Dr. Schieferdecker, Prosector in the Anatomical Institute, has been promoted to the rank of Extraordinary Professor.

Dorpat.—Dr. Lacher of Graz has been offered the post of Extraordinary Professor of Otology.

Heidelberg.—Professor Fischer of Würzburg has declined the invitation to take the chair of Chemistry.

Tomsk.—Dr. Veliki, *privat-docent* in the University of St. Petersburg, has been appointed to the Professorship of Physiology, although not a medical man. He has, however, been assistant to Professor Ovsyanikoff, and holds the degree of Doctor of Zoology.

Tubingen.—Dr. Garré has been promoted to the rank of Extraordinary Professor.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Professor A. v. Biesiadecki of Lemberg, well known for his writings on the Siberian plague; Dr. Chantrain, body physician to the King of the Belgians; Señor Don Joaquin Gimeno, Professor of Pathology in Saragossa.

A GREAT FIRE occurred at Surat in the early part of the week destroying a quarter of the city and rendering 15,000 people homeless. Cholera has also broken out adding to the misery of the inhabitants. Measures for the relief of the sufferers have been started both at Bombay and Surat, and Lord Reay, the Governor of Bombay, proceeded to the scene of the conflagration.

MR. ANDREW REID, of Newcastle-on-Tyne and Queen's Head-passage, Paternoster-row, London, has issued a cheap coloured map, showing the areas in China in which the present appalling famine is prevailing. The money subscribed to the Lord Mayor's fund, instituted to afford relief to the sufferers, is forwarded to a committee of British residents in Shanghai, and is distributed by missionaries who have personal knowledge of the distressed districts.

ACCORDING to a Reuter's telegram from Sydney, the Commission appointed to examine M. Pasteur's method of destroying rabbits have issued their report, in which they state that, while chicken cholera is fatal to the rabbits inoculated with the virus or fed with infected food, the disease does not readily spread from animal to animal.

WE regret to announce the death of Mr. A. E. Taylor, senior assistant medical officer at the Stafford County Asylum. The sad event was due to blood-poisoning consequent upon a wound received during the performance of a post-mortem examination

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THE Società Chirurgica Italiana (Surgical Society of Italy) holds its sixth annual meeting at Bologna on the 16th, 17th, and 18th inst. Tickets of admission may be obtained on application to the "Presidenza della Commissione Direttrice," Bologna.

WE understand that Mr. Matthews, the Home Secretary, has consented to receive a small deputation of Fellows and Members of the College of Surgeons interested in the question of reform.

DR. GIUSEPPE LAPPONI, a young and distinguished graduate of the Bologna school, has just been appointed body physician to his Holiness Pope Leo XIII., in succession to Dr. Valentino, deceased.

DR. WILLIAM PASTEUR has been elected to the newly-created office of Fourth Assistant Physician at the Middlesex Hospital.

FREDERICK W. ANDREWES, M.A., M.B. Oxon., Fellow of Pembroke College, has been appointed Assistant Physician to the Royal Free Hospital.

WE learn that Mr. John Wood has resigned his post as Examiner in Surgery at the Royal College of Surgeons.

THE illness of Dr. von Lauer, which we announced in our last issue, has, we regret to learn, terminated fatally.

THE CITY OF LONDON TRUSS SOCIETY.—The committee appointed at the annual meeting, held in February last, "to consider the salaries of the whole of the officers of the Society," convened an extraordinary general meeting of the subscribers on the 27th ult. There was a very large attendance. Mr. J. Norbury presided. The report of the committee made two recommendations affecting the medical officers, which raised an animated discussion, but personal explanations were given by them, and it was eventually decided that the existing arrangements with them should remain unaltered.

THE CAUCASIAN MEDICAL SOCIETY.—The Caucasian Medical Society is celebrating this month the twenty-fifth anniversary of its foundation. The headquarters are at Tiflis. The Society boasts a considerable number of members, and a journal which frequently contains valuable matter.

OFFICIAL REPORT ON SHEFFIELD SMALL-POX.

THE official report on the Sheffield small-pox epidemic of 1887–88 has just been issued, and it calls for the most careful study by all concerned with the control of that disease in this country. For not only does it indicate in a manner never hitherto attempted what is the precise value of vaccination as a preventive of that disease, but it shows in a way that we can only regard as appalling what we have to expect if, in determined defiance of the already dearly bought experience as to the aggregation of small-pox patients in hospitals within our towns and cities, those who are responsible for the public health still persist in the maintenance of such institutions in the midst of our urban communities. The Sheffield epidemic attracted a large amount of attention in the country, and, in fulfilment of Mr. Ritchie's promise in the House of Commons that it should be fully investigated, Dr. Barry was instructed to make the necessary inquiry.

The resulting report gives an account of the most exhaustive investigation to which any epidemic of small-pox has ever been subjected; it covers no less than 304 pages of printed matter; it contains a detailed account of an incidence of small-pox upon a population of some 300,000 people, and it gives the materials collected during a house-to-house inquiry which affected some 60,000 houses. Information was thus elicited as regards each individual, as to age, date of vaccination, and attack from small-pox, whether during the epidemic under consideration or at some antecedent date. There is also an abundance of other material bearing on the relation of surrounding sanitary circumstances and of the health of individuals to attack from small-pox; and the influences causing fatal as opposed to non-fatal attacks are also fully discussed. A large number of plates and diagrams are included in the document, which supplies abundant matter for examination and discussion of almost every point that can be raised in connexion with the subject of small-pox, its methods of diffusion, and the extent to which it can be controlled by vaccination.

As a preface to the volume, Dr Buchanan has submitted to the President of the Local Government Board a report in which he summarises the principal conclusions which are to to be drawn from the facts elicited by Dr. Barry, and in which he indicates in a clear and masterly way the several lessons, both new and old, which are taught by the story of the Sheffield epidemic. It is essentially with this preliminary report that we propose to deal on the present occasion.

Dr. Barry's inquiry came to an end on March 31st, 1888, and it does not therefore include detailed reference to the attacks, or to the ninety small-pox deaths which occurred during the subsequent quarters of the year; but it records all that was of importance during the whole course of the epidemic, and it takes minute account of over 6000 small-pox cases and nearly 600 small-pox deaths.

The first point of importance referred to by Dr. Buchanan relates to the isolation of the earlier attacks of the disease in the borough hospital, and it is shown how, as the steady removal of small-pox patients to it was carried out, the houses within circles of 4000 and 1000 feet around the institution became attacked almost suddenly to a degree amounting to a dozenfold and to eightyfold respectively the rate of the rest of the borough; the incidence of the disease upon those living within a series of zones around the institution varying precisely as the distance of their houses from the hospital varied. In short, the Fulham experience was enacted anew; and we would urge our readers to a careful examination of the copious series of maps showing the influence of the Sheffield hospital fortnight by fortnight

upon a series of four zones around it; the first circle having a radius of 1000 feet, and the succeeding zones being each an additional 1000 feet further from the hospital, until the so-called "special area" formed a circle having a radius of 4000 feet, with the hospital as its centre.

The first set of maps show that the special area was, at the onset of a comparatively trivial occurrence of small-pox, almost absolutely free from the disease; the next set indicate that during the first two months of a still small prevalence, and whilst the hospital was hardly or not at all in use, the incidence of small-pox in the borough, to quote Dr. Barry, "was almost entirely confined to that part of it outside the special area." We next find that, with the concentration of the scattered small-pox patients in the hospital, a smart occurrence of the disease takes place in the immediate neighbourhood of the institution, only some half-dozen cases occurring elsewhere in the great area of the borough; and a further map shows that, whilst this was going on within the special area, only one solitary house was attacked in the remainder of Sheffield during a whole fortnight. For several such periods it is next shown that the prevalence outside the special area is practically at an end; but, with the still slowly increasing aggregation of the sick in the hospital, a very serious prevalence suddenly occurs within the special area. Fortnight by fortnight this prevalence increases; indeed, a true epidemic now prevails within the hospital zone, the borough beyond still remaining all but free. Further maps show how the epidemic in the special area increases in magnitude and diffuses itself towards the boundary of the zone, and how it next overleaps the boundary and begins to attack houses outside that zone. During the fortnight ending Sept. 24th, the populous parts of the special area are covered by a mass of red spots showing the newly infected houses, and hanging round its outer zone the disease is steadily but surely invading the remainder of the borough. Map after map tells of the increase; the inner zones become now densely packed with houses newly infected, and the ominous red spots are being distributed broadcast outside the hospital area and diffusing themselves rapidly over Brightside, Athercliffe, and South Sheffield, until at last an altogether uncontrollable epidemic is in full operation in the borough.

Summarising this hospital influence, Dr. Buchanan, whilst admitting that the establishment "operated to the disaster of Central Sheffield," adds that "it must remain (to say the least) an open question whether throughout the epidemic period as a whole the hospital did not do more harm than good to the borough." We know how studiously Dr. Buchanan in his writings avoids drawing inferences which he feels he may not be able to substantiate in every detail, but we cannot help thinking that if he had been free from official trammels he would have penned that sentence differently. If ever a small-pox epidemic was artificially manufactured by the cultivation of a special virulency of contagion as the result of the aggregation of small-pox patients at one centre, this result was achieved in Sheffield. Indeed, we believe there are few who, having submitted Dr. Barry's maps to a careful and critical examination, can turn away from them without the conviction that the hospital was the means of transforming that which would probably have been a very limited outbreak of small-pox into the disastrous epidemic which followed. As regards the method by which the hospital exerted its influence upon its neighbourhood—whether through the general atmosphere or by personal communication,—it may be that "we learn nothing from the experience of Sheffield," because of the operation of grave faults of administration in connexion with the hospital. The matter is, for the purposes we now have under consideration, comparatively unimportant, for we well remember how utterly futile were the determined and maintained efforts of the Metropolitan Asylums Board to prevent the diffusion of small-pox around their hospitals by the most rigorously enforced administrative restrictions. The fact which we have to face—and for the last time, we hope—is that small-pox hospitals placed in populous centres, and as at present constructed, do spread the disease widely around them; that they do this under circumstances altogether beyond our control; that in the end they often do far "more harm than good," tending by the concentration within them of a limited number of scattered cases to transform minor occurrences of the disease into severe and fatal epidemics.

We must return to the report on another occasion in connexion with the very interesting lessons it teaches as to the influence of vaccination as a protective against small-pox; and we would now only further express our disappointment that those who determine the cost of Government papers should have practically prevented access to this report by sanitary authorities, health officers, and the public generally, through their attempt to replenish the public purse by the imposition of an altogether prohibitive price for a document which calls for the widest possible circulation.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

[FIRST NOTICE.]

IN issuing his report on the proceedings of the Medical Department of the Local Government Board during 1887, Dr. Buchanan refers to the impending publication of two further reports in folio size. One of these is Dr. Ballard's report on his investigation of the causes of the annual mortality from diarrhœa, which is observed principally in the summer season of the year among British communities. This report has long been looked for, and, although we have reason to believe that the investigation with which it deals is not yet completed, yet the volume may be expected to give a substantial instalment of the information which has been procured on this important subject. The other report is on the Sheffield small-pox epidemic, upon which we comment in another column.

Dealing firstly with the question of vaccination, Dr. Buchanan points out that of the total births in England and Wales during 1885—the last year as to which complete information is available—5·9 per cent. had not been successfully vaccinated according to the returns received, and that of these births 7·3 had to be allotted to the metropolis and 5·6 to the provinces, both figures exhibiting an increase of above ¼ per cent. over those of the returns for 1884. Indeed, it cannot fail to be noticed that in some places, both on the part of the public and on that of the Poor-law guardians who administer the Vaccination Acts, there is a growing callousness as to their duty to children in this matter, and we very much fear that it will tend to increase until it is found that the unvaccinated children are bearing the brunt of our next small-pox prevalence. Then, as heretofore, will come a rush for vaccination, which it will be difficult to meet on the spur of the moment. With regard to vaccination by calf lymph, this practice seems to be on the increase. During 1887 the number of points that were issued charged with this lymph amounted to 18,324, in addition to 46 capillary tubes; besides which, over 6000 children were vaccinated directly from the calf at the Lamb's Conduit-street station; and Dr. Buchanan points out that this latter metropolitan work is quite in excess of anything that was originally contemplated, and that the existing premises are not adapted to it. Some country authorities have also asked for similar privileges locally; and the whole question of the supply of fresh calf lymph will probably have to be reconsidered by the promised Royal Commission.

Two other points relating to vaccination deserve consideration. One has to do with an allegation that a child was suffering from a severe skin disease induced by vaccination. The case turned out to be a "bromide rash," the result of a fortnight's drugging with bromide of potassium at a period three or four months after vaccination. This form of rash is not so widely known as it should be, and hence, in order to prevent similar mistakes in the future, a plate has been inserted in the report, and by this means an excellent example of bromide rash can be studied. The other point has to do with so-called "insusceptibility" to vaccination, which unfortunately appears too often as a final return in the books of vaccination officers, and which is supposed to mean that, three unsuccessful attempts

having been made to vaccinate a child, its system is insusceptible to the cow-pox virus. As to this, the experience of Dr. Cory has been sought. That experience is one of the widest in the kingdom, and it is as follows. On four occasions "insusceptible" cases have been sent to him, and in each instance a first attempt at vaccination by him was successful, the results being quite characteristic of vaccine. As to Dr. Cory's own vaccination work, he says that he has performed over 38,000 primary vaccinations, and only once did it fall to his lot to fail twice in an attempt at vaccination. In this case the mother of the child admitted that it had twice before been "vaccinated," although without result. Dr. Cory had no opportunity of trying a third time, but it may reasonably be inferred that one or other of the two former operations had been so far successful, although not producing ordinary results, as to remove this child altogether from amongst the class of the unvaccinated. This experience is believed to be similar to that of the late Dr. Marson's; and it really becomes more than doubtful whether, when vaccination is performed by a skilled operator and with properly selected lymph direct from the arm of a child or from a calf, there is such a thing as insusceptibility to it. One thing, however, is certain, and that is that the ordinary cases of insusceptibility are the result of operations performed otherwise than in the manner indicated.

Amongst the reports of the Medical Department which are reproduced by Dr. Buchanan there are a number dealing with such points as the construction of houses back-to-back, port sanitary organisation, the outbreak of enteric fever at Mountain Ash, of diphtheria at Ealing, of anthrax at Arnesby, of meat poisoning at Retford, and as to the occurrence of eels in the water mains of the East London Water Company. Most of these reports, which have thus been selected as worthy of being placed on permanent record, were commented on by us at the time of their issue, and two only remain for brief notice on this occasion.

The anthrax at Arnesby was investigated by Mr. Spear, who, though unable to identify the original introduction of the disease, found reason to suspect the drainage from certain tanneries as having been the way in which the infection was first brought. Group after group of animals in a special field were attacked, and of the nine men who had the handling of the infected carcases six suffered from malignant pustule or other evidence of anthrax, one case terminating fatally. The Retford outbreak of meat-poisoning occurred amongst the consumers of a particular batch of pork pies and brawn; twenty-two families and eighty individuals being attacked, with one death. Mice fed by Dr. Klein with part of one of the implicated pork pies suffered much, as did the human patients, with the addition of a notable amount of lung inflammation; and Dr. Klein believes that he was able to identify a particular bacillus as having given to the pie its morbific quality. Artificial cultures of the organism reproduced the same symptoms in mice, and the bacillus was recoverable from their tissues. As the result of the some half-dozen cases of meat poisoning that have been investigated, Dr. Buchanan points out that it has been observed that the ability of the food to cause disease has been an increasing quantity for the first three or four days, and thenceforth a diminishing quantity. This observation may turn out to serve usefully as a means of diagnosis, and it is interesting to note that it applies in a somewhat striking way to mice also. Thus, while mice fed with cultures made three days previously were invariably affected in the way described by Dr. Klein, the material of culture from ten to fourteen days old was absolutely without effect on the mice.

SURGICAL DIAGNOSIS OF DISEASES OF TEETH.

AT a recent meeting of the Odontological Society, Mr. JONATHAN HUTCHINSON read a paper on several points in connexion with the diagnosis of diseases of the teeth.

Rigg's Disease, or Pyorrhœic Alveolaris.—Mr. Hutchinson said, with reference to the malady known as Rigg's disease, which is characterised by suppuration about the roots of teeth, these themselves showing no caries, that it was first brought under his notice by an American patient who presented these symptoms, and he learnt from her that this disease was common in the United States, and there known under the name of Rigg's disease, from the dentist who first accurately described and treated it. His interest was aroused as to whether it was a constitutional or local disease. It appeared to him analogous to sycosis, in which the hair falls, not simply from arrest of nutrition, but from inflammation of the hair follicles affecting the beard, hairy scalp, eyelashes, and, in some rare instances, the nails—sycosis ungualis,—all the toes and fingers being perhaps attacked. Is this sycosis constitutional? Sometimes it is, but much more often not. Pathologically, tinea tarsi is a contagious inflammation spreading from hair to hair, that contagion being conveyed by the pus secreted in the hair follicle. His experience of Rigg's disease is that it occurs in patients having the best of health, just as in many cases of sycosis; sometimes there was slight constitutional disturbance, which might act as a predisposing cause. Just as in tinea tarsi the local treatment was more efficacious than the constitutional, so with Rigg's disease; but in the latter case it is not desirable to pull out the teeth, as is done with the eyelashes, in order that the lunar caustic or other drug may more readily reach the seat of inflammation, since teeth do not grow again, though the treatment must be in the same direction—namely, to dry up the secretion of the contagious pus.

Materials used for Stopping Teeth.—Without for a moment disparaging the value of amalgams as a stopping material, Mr. Hutchinson believed that in some rare instances they were the cause of intractable and irritable sores upon the lips, gums, and cheeks. He spoke simply as an observer, not knowing the chemical composition of these stoppings, many of which, he was told, were secret preparations; but he had certainly seen ulcers which refused to yield to treatment disappear after the removal of discoloured amalgams. He had always been careful to eliminate the probability of roughness of the stopped tooth being the cause, and had never seen ulcers where gold fillings had been employed. He quoted a case of an American physician who presented a number of ulcers which several surgeons had pronounced syphilitic; the patient, however, stoutly maintained that he had never had syphilis or a symptom of it, and all his children were perfectly healthy. Mr. Hutchinson, finding that he had several amalgam fillings, which had been inserted some years before in America, ordered their removal, which being done, the ulcers rapidly disappeared.

Syphilitic Teeth.—Mr. Hutchinson said he had little new to say on this subject. The notched incisors were now generally admitted as evidence of hereditary syphilis. The upper centrals are the *test* teeth, and in no single instance had they misled the lecturer; but the markings on other teeth might be misleading, as they were often caused by the mercury given as a remedy for the syphilis, and were not due to the syphilis itself. In the great majority of cases of hereditary syphilis the markings on the central incisors are present, but not always so. Of several members of the same family one or two might have the characteristic teeth, while the others escaped. He wished to draw attention to two points of clinical observation. (1) In all cases where interstitial keratitis occurs there are found malformed teeth, and those who have the *test* teeth characteristically marked have suffered from interstitial keratitis; (2) children who show signs of hereditary syphilis in the shape of phagedænic affections of the throat have no peculiarity of the teeth, and do not have interstitial keratitis.

Stomatitis or Mercurial Teeth.—Notwithstanding that his views were not generally accepted, Mr. Hutchinson believed that stomatitis due to the exhibition of mercury did give rise to inflammation of the tooth follicle, and that it was by far the most common cause of defects of the enamel. The first permanent molar should be compared with the temporary molars; the cusps of the former will have a spinous character and the tooth be discoloured, whereas the temporary molar will have normal rounded cusps. The incisors and canines of the permanent set might be marked with transverse grooves. In cases where mercurial teeth were present, it was important to be on one's guard when prescribing mercury, as those patients had often the idiosyncrasy of being easily salivated, and he quoted a case in support of this view. In lamellar cataract associated with malformed teeth, Mr. Hutchinson thought the latter was due to the use of mercury.

With reference to the correlation between the teeth and other structures—for instance, the skin and eye,—Mr. Hutchinson referred to a case reported by Mr. Moon, where there were rat-like teeth associated with micro-ophthalmos

and deficiency of hair, and to a case of his own reported in the Medical and Chirurgical Society's Transactions, of a child with absolute absence of hair, and the mammary glands represented only by a scar, but with no peculiarity of teeth or eyes. A hairless puppy also showed no deficiency in milk teeth. Mr. Hutchinson remarked that much valuable information might be gained upon this subject if in cases of deficiency of teeth dentists would inquire into the state of the eyes and skin, and if surgeons, where micro-ophthalmos is present, would examine the teeth as to their character and number. It was an interesting question whether it was possible to infer from the teeth something about other tissues; and in the case of loss of teeth, it was not sufficient to note that fact, but to inquire how they were lost. The tendency to accumulate tartar did not altogether depend upon the deficient use of the tooth-brush, but was more often due to the excessive secretion of saliva, and was often associated with gout. Abnormalities of the milk teeth were produced during uterine life, and thus escaped manifestations of hereditary syphilis. The term "rickety teeth" had no definite meaning. Gouty teeth had no peculiarity, but in old medical books gouty persons were described as having the habit of grinding their teeth, and this was looked upon as indicating a gouty diathesis; hence wearing down of the teeth was often ascribed to gout.

THE PARIS UNIVERSAL EXHIBITION.

(FROM OUR SPECIAL CORRESPONDENT.)

IN less than a month's time the greatest Universal Exhibition ever held will be open to the public. With the exception of a few pavilions in the gardens and some of the decorative work, the building is now completed. It is a giant structure that will redound to the honour of the great and generous nation which has prepared this peaceful celebration. The scientific, engineering, and architectural skill displayed will inspire every visitor with a profound sense of the immense resources that civilisation places at our disposal. After such a display nothing will seem impossible where industry is based on science, and capital and labour are united. In this glorious vindication of the high capacities of the human race in general, and of the French people in particular, the sciences of medicine and hygiene will hold a prominent position.

The exhibits are divided into nine groups and eighty-three classes. The first group consists of works of art; and in the fifth class (engraving and lithographs), we shall find anatomical and other drawings bearing on the healing arts. In Group 2 (education and the liberal arts) may be studied many questions relating to the hygiene of the schools; while Class 14 is devoted exclusively to medicine, surgery, and veterinary medicine; Class 15 consists of instruments of precision. Group 3 is destined to furniture and its accessories; and here again many questions of health are involved. What constitutes sanitary furniture is a subject that has not yet been sufficiently studied; and under this group we have Class 27, apparatus and processes for heating and lighting by gas, electricity, &c. Group 4 consists of textile fabrics, clothing, and accessories; here again we may inquire what constitutes sanitary clothing, and doubtless some attempts will be made to solve this problem at the Exhibition. Group 5 represents the mining industries, raw and manufactured products. The ventilation and hygiene of mines are very important questions, especially in England, where miners number hundreds of thousands. This group, Class 45, comprises the chemical and pharmaceutical products, and will be a very large and rich section. Group 6 represents mechanical manufactures, and includes (Class 51) the apparatus and processes used in chemistry and pharmacy; Class 60, carriage building, and Class 61, railway apparatus. The ventilation, warming, and general comfort of railway carriages, in these days of universal and constant travelling, are worthy of special notice. Class 63 relates to civil engineering, public works, and architecture; while Class 64 is devoted exclusively to hygiene and sanitation. Class 65 deals with life-saving apparatus, and among the "war materials" of Class 66 are many things that affect military hygiene. Group 7 is devoted to food products, and all its seven classes have a distinct bearing on public health. Class 68 is devoted exclusively to bread and pastry, and here we may hope to find more wholesome processes of making bread than those still practised by small bakers. Group 8 represents agriculture and pisciculture, and in this group, Classes 75 (viticulture) and 77 (fish and shell-fish) form part of the great food and drink problems. Finally, and for the same reason, in Group 9, representing horticulture, there is Class 80 (vegetables) and Class 81 (fruit and fruit trees), that are also connected with health questions. Consequently, from a medical and sanitary point of view, the visitor should examine the exhibits of the following classes: 5, 14, 15, 27, 45, 51, 60, 61, 63, 64, 65, 66; Group 7 (food), Classes 68, 75, 77, 80, and 81.

The French section devoted to hygiene promises to be important and interesting. It stands quite apart on the Place des Invalides and near to the exhibits of the Ministry of War, where the Tollet system of portable ambulances will occupy a large space. Immediately opposite are a number of pavilions, pagodas, and strange structures representing the French colonies of Gamboge, Cochin China, Tonkin, Tunis, Algeria, &c. This is fortunate, for these very picturesque buildings, with natives in their strange costumes, will not fail to attract a large crowd. The people will thus be brought in the immediate vicinity of the building devoted to hygiene, and sanitary matters are not so likely to be overlooked. This has occurred too frequently in previous exhibitions, and it should be the purpose of the Exhibition to popularise among the masses the knowledge of the laws of health. For this purpose nothing could be more useful than the sanitary and insanitary houses which were built side by side at the London Health Exhibition. This excellent example has been followed by the French authorities, and a sanitary and insanitary house are now in course of construction on the Esplanade des Invalides, close to the hygiene section. Here also is a Danish portable hospital, and the very important section relating to social economics, which will include several model artisans' dwellings. In the hygiene section will be some good evidence of the progress achieved in France during the last few years. For instance, disinfecting apparatus will be shown in full work. The Paris Municipal Council will take the first rank in this question, and its President, Dr. Chantemps, will exhibit his works relating to isolation hospitals, and methods for disinfecting not only beds and bedding, but walls and floors, by the projection of mercurial solutions There will also be slaughterhouse stalls and methods for washing them with a boiling solution of chresilic acid, derived from a distillation of English coals. The town of Paris will exhibit the elaborate measures and implements employed for cleansing the sewers, sweeping the streets, &c. Not only are drains in full working order to be displayed, but on the Trocadero there is to be a small sewage farm, where vegetables will be grown by irrigating the soil with the sewage taken from the nearest sewer. That this should be done in the very middle of an exhibition to be visited by millions of people will be, it is thought, an effective demonstration of the innocuous character of sewage farms.

The Administration of Public Assistance, which corresponds to some extent with our Poor-law administration, will have many very interesting things to show, among them being a collection of cradles, of all ages and styles. The physical education and care of children and infants are subjects that are to be very fully treated, and the Exhibition will do something to dispel popular and injurious habits and superstitions. It will be seen, therefore, that in the Exhibition itself there is sure to be much to attract and instruct those who study health questions. And even those who are not attracted by the Exhibition may be tempted by one or more of the many international congresses that will be held. The greater number of these congresses are under the patronage of the Ministry of Commerce and Industry, but some are independent. Under Government patronage there will be in all no less than sixty-nine international congresses, and of these eleven bear directly on medical and sanitary questions. These are the international congresses: 1. Mental Diseases. 2. Forensic Medicine. 3. Diseases of the Ear and Throat. 4. Skin Diseases and Syphilis. 5. Climatic Treatment of Disease. 6. Therapeutics. 7. Hygiene and Demography. 8. Veterinary Medicine. 9. Poor Relief. 10. Dental Surgery. 11. Homœopathy. Then, over and above these eleven congresses, there are ten congresses that relate to social science

which will not fail to interest medical men. For instance, there is to be an international congress on the Housing of the Poor, an International Baker's Congress, where bread reform theories and the virtues of whole-meal bread may be advocated. There is also a congress for improving the Condition of the Blind. The advocates of Temperance will be gathered together for a great international congress, and there is to be a Life-saving Congress, where Capt. Boyton might occupy a seat of honour. A congress of Criminal Anthropology, too, will be watched with interest.

Altogether, no doubt can be entertained that Paris will be the centre of attraction during the whole of this summer. A larger number of visitors will crowd to this gay capital than have ever been seen before. This immense influx, coming from all parts of the world, must involve some grave health problems, and we are glad to note that the authorities are taking special precautions. In a further article we will describe some of the improvements effected of recent years; and though the sanitarian will still find much to complain about in the sanitary condition of Paris, still it is satisfactory to know that matters are better than they were; that the risk of infection will be considerably less than during the last Exhibition, which, it will be remembered, was followed by a small-pox epidemic. On this occasion strict orders have already been issued with regard to vaccination and revaccination. Among other precautions, no acrobats, strolling performers, and nomads generally, will be allowed to enter Paris unless they submit to vaccination or show satisfactory vaccination marks. Such measures are highly commendable and most necessary. The knowledge that the authorities realise the importance of such precautions will contribute very materially to increase the number of foreigners who will hasten to Paris to see the Exhibition, to assist at the congresses, and participate in the numerous fêtes with which the centenary of 1789 will be celebrated.

Paris, April 8th.

ACCIDENTS AMONG DOCK LABOURERS.

IN describing the prevalence of accidents among dock labourers we lately related what the men themselves thought on this grave question. We were assured that, in the course of five years' constant work, at least 50 per cent. of the "dockers" would suffer some serious accident, and we defined a serious accident as a hurt which would compel the labourer to leave off work for at least a few days. This statement has been vigorously challenged and energetically denied. We cannot now, any more than in the past, vouch for its accuracy. There are no positive statistics accessible; no complete record of accidents has been kept. The subject must ever remain one of mere conjecture. Nevertheless, there is sufficient circumstantial evidence available to show that this conjecture is not lightly made, and is probably not very far from the truth. Colonel Martindale, C.B., in his evidence before the House of Lords Commission on Sweating, has brought forward an extraordinary array of figures, which at first sight seems utterly to destroy the above contention. Colonel Martindale stated that in the docks under his management an average of 5300 persons were employed, and that in the twelve months ending Oct. 31st, 1888, eight were killed, one drowned, and 133 injured. Dividing 5300 (the number employed) by 142 (the number of killed and injured), we find that it would take eighteen or nineteen years for 50 per cent. of the workers to be killed or injured; whereas the dockers believe that half their number would be injured in the course of only five years.

We see nothing in Colonel Martindale's calculation which can be taken as refuting the dockers' estimate. First of all, anyone acquainted with the inner working of dock labour must know full well that the official figures given by the dock companies are very much below the number of accidents which actually take place. Ruptures, for instance, are not included in their estimate, and they form a very large proportion of the accidents that do occur. Colonel Martindale deals with them separately, and remarks that his dock company has supplied forty trusses during the year in question. But it is a fundamental error to believe that all the labourers suffering from rupture apply to the dock company for the gift of a truss. On the contrary, they are anxious to conceal the fact that they are ruptured, fearing that this might injure their prospects of obtaining work. Then again, most of the injuries to the spine would not appear as accidents. The consequences are slow in development; the worker himself does not know that he is seriously hurt till some months or even years afterwards, and then he gradually disappears as unfit for work, and his name is certainly not entered among those who have suffered from an accident. The fact that this dock company acknowledges 142 accidents in one year is of serious import; for what must have been the real number of accidents if there are so many that escaped concealment? But, above all, it is necessary to observe that the estimate of 50 per cent. of accidents in five years applies wholly and solely to the dockers—that is to say, to the men who unload the ships. The stevedores—i.e., the men who load the ships—are notoriously better paid, better organised, and are not so much overworked, and, consequently, accidents are not of such frequent occurrence. Of course, if, in estimating the total number of labourers, the stevedores, the messengers, the various hangers-on, and miscellaneous assistants are included in the figure, then the proportion of accidents will be comparatively small. It is as if, in estimating the percentage of killed and wounded in a battle, we included not merely the number of actual combatants, but also the reserve forces and the camp followers.

The figures given by the stevedores go far to confirm the estimate which all dockers have formed as to the proportion of accidents that occur among the latter. Mr. MacCarthy, secretary of the Stevedore Society, in answer to our questions, stated that his association numbered 1600 members, and that, on an average, 800 of the men were at work daily. When an accident happened, a special levy was made among the men so as to assist the wounded. He declared that an accident occurred about once a week. Fifty accidents a year out of 800 men would give us a proportion of fifty accidents for every hundred stevedores in the course of eight years' work. As the stevedores' labour is much safer than that of the dockers', it was not unreasonable for the latter to suppose that they were exposed to 50 per cent. of accidents in five years.

To obtain information on all these points is a matter of considerable difficulty. It must be borne in mind that dock labour is the resort of despair. A man who works in the docks does so because he has failed to obtain employment elsewhere. He is, therefore, in constant dread of losing what little he can make from the dock companies. The competition for employment is so keen that the docker hardly dares say what he knows, and in the presence of a stranger observes the utmost reticence. If he has an accident, unless it be of the severest character, he will seek to conceal the fact, and he knows that all forms of complaint reduce his chances of obtaining employment. Nevertheless, at a small meeting of dockers in the Poplar district we succeeded in interviewing ten labourers, and the following is a brief summary of the notes we took. We suppress the names so as not to injure the men, though for private use we have both their names and addresses.

Case No. 1 described that he had formerly been a gentleman's servant, but for the last six years had worked in the docks. He was engaged in a timber yard, and while conveying timber from a ship to a waggon the wood fell off the waggon upon him. He was removed to the hospital with a fractured thigh; there he remained for four months. His convalescence lasted five months more, so that he was altogether nine months unable to work. The dock company allowed him during his illness 9s. a week, and with this he had to keep his wife and two children. Before the accident he was able to make £1 a week. Now, though with the machines he can do as good a day's work as anyone—and the other dock labourers standing by testified to this fact,—still the dock superintendent had, he believed, orders to give him only two days' employment per week. Men who were in front of him and behind him on the list were taken in preference to him. This case showed how, when men are injured, they are gradually squeezed out of the work.

Case No. 2 had worked nine years as a docker, and generally obtained six or seven months' employment in the year. In the course of the nine years, representing at most only five years' actual work, he had met with three accidents. The first was caused by the falling of a bale of wool from the stage into the hold of the ship he was aiding to unload. The bale struck him, and dislocated his knee-

cap and ankle. The second accident was not so serious. He was struck in the eye by the handle of a pump. The third accident was caused by some casks of treacle, which were leaking. In seeking to move them, his foot slipped on the treacle. A man who was assisting him had only a thumb and two fingers, having lost the other fingers in a previous accident, consequently he could not grasp a cask which was falling with sufficient firmness, and it severely lacerated the leg of his colleague. For four weeks the wounded man was laid up, and for three weeks more could hardly get about. He received an allowance of 8s. a week from the dock company during that time.

Case No. 3 works at piling teak wood in a dockyard. One day he had been reproached for lingering over his beer or lunch time. This made him somewhat nervous, and his hand was caught between some logs of wood, crushed, and half cut in two. He was laid up for eighteen months. While he was in the hospital he received 5s. a week, and when out of the hospital 6s. a week. In his department accidents are very frequent, and whenever a mishap takes place a collection is made among the men, but never more than one collection a week. It sometimes happens that five men are waiting for their turn to have a collection made on their behalf. He thought that, on an average, there were about 100 workers employed in this yard, and that there were about thirty such collections made every year. This, it will be seen, greatly exceeds the dockers' general estimate, for we have 30 per cent. of accidents in one year instead of 50 per cent. in five years. We may even make a large allowance for possible exaggeration, and still the result is most distressful.

Case No. 4, a docker, during fifteen years' work, had his leg cut open, was eight weeks in bed, and received 8s. a week from the dock company. On another occasion the bone of a finger was broken and had to be excised. On a third occasion some foreigners, employed on board a ship, not understanding English sufficiently, let go a winch too soon, and it struck his head.

Case No. 5 was also wounded in the head by a winch handle, and he was laid up for a month. Subsequently his leg was injured by the fall of a bale. He was invalided for a fortnight, and only received 2s. 6d. a week from the dock company. This man has worked nineteen years, off and on, in the docks.

Case No. 6, during thirteen years' occasional work, has had three ribs fractured. He was thirty-one days in bed, and received no sick allowance whatever.

Case No. 7 had his arm and side so hurt that he has permanently lost the power of lifting anything. This case was brought to court, and compensation claimed; but the dock company having offered as a compromise permanent employment of a light description, such as carrying messages &c., he thought this would be better than striving for damages. For a year he was constantly employed; then he was offered only three days' work a week, and now rarely gets more, thus earning only from 9s. to 10s. a week. Consequently this docker now regrets not having insisted on forcing forward his claim for damages.

Case No. 8 has worked for nine years. He fell down the hold of a ship; his hip and shoulder were severely contused. He was invalided for nine weeks, and received an allowance from the dock company of 9s. a week. He has met with other small accidents.

Case No. 9, during eighteen years' occasional work, has been in the hospital twice. The first time a tea-chest fell and crushed his foot. The second time he fell from the stage on to the deck of a vessel with a frozen sheep on the top of him. He suffered from concussion of the brain, and was invalided for four months, receiving 5s. a week allowance.

Case No. 10 had his arm in a sling for three months in consequence of a contused elbow. He received no allowance, but was given three days' light employment per week, so that he should not starve while his arm was unfit for work.

The labourers whom we had thus questioned were very positive in their assertions that the directors of the dock companies did not know the number of accidents that actually took place. If accidents were always reported the foremen would be censured, and the man who had caused the foreman to be censured by reporting his accident would find it difficult to get employment when cured. It therefore was wiser to go away quietly and trust to the charity of fellow workers for help, instead of making claims on the company. With regard to the Employers' Liability Act, very few dockers had any idea as to its provisions or made any attempt to put it into force. In the ten cases we have described only one sought for compensation, though he finally accepted a compromise. A small allowance while actually incapacitated for work is the most the dockers seem to expect. It is time, therefore, that better-informed outside influence should be brought to bear. The investigation of these grievances has naturally suggested several remedial measures, which we will seek to bring forward at an early date in as practical a form as possible.

ST. RAPHAEL.

(FROM A CORRESPONDENT.)

As a health resort and winter residence this little known but charmingly situated town, with its suburb of Valescure, is rapidly coming to the fore, not only on account of its climate and scenery, but also because of its nearness to England. It is situated on the eastern side of the Bay of St. Raphael in the Mediterranean, is not very far from Hyères, and is only forty-three minutes' ride by rail from Cannes. It is the second nearest health resort to England, Hyères being the nearest. St. Raphael, being on the coast, has a tonic, stimulating, and bracing climate; whilst Valescure, being about two miles inland, and situated on the southern slope of a hill and in the midst of a pine forest, has a warmer and more sedative climate. It is also exceedingly well sheltered from the wind in every direction. St. Raphael and Valescure are eminently suited as a health resort and place of residence for those whose health cannot stand the more bracing and exciting influences of the busy and fashionable resorts of Cannes, Mentone, Nice, &c. Also, on the score of expense, St. Raphael bears the palm for cheapness. It is essentially a rising place, as it only began to come into note about eight years ago; but since that time more than 300 villas have been built, and are occupied during the winter season chiefly by the English visitors and residents. As a summer resort it is largely frequented by the French, who go there to escape from the heat of the interior, to inhale the invigorating sea breezes, which keep the town cool even on the hottest day; and also for the sea-bathing, which is very good. St. Raphael and Valescure are protected from the wind on the north by the Alps; on the east by the Esterel Mountains, which separate them from Cannes; and on the west by the Montagnes des Maures, which separate them from Hyères. All these mountains are covered by thick pine forests. The only wind which reaches the town very much is the north-west wind, or mistral, as it is called; and this, although much feared, does not blow nearly so often as is commonly supposed, and it is hardly felt at all at Valescure. The alteration in temperature before and after sunset is not nearly so marked as at the warmer and more sheltered health resorts; also the mist that rises after sunset at Cannes, &c., is entirely absent, the air being as clear after as before sunset. The soil is chiefly gravel and sandstone, and the ground dries very quickly after rain. The average number of rainy days in the season is not more than forty, and on other days the sky is almost, if not absolutely, cloudless. Living is cheap, and good villas, either furnished or unfurnished, can be obtained at moderate rentals. There is an English church, at which daily services are held, and there is also a small English colony, but this is increasing in size every year. Roses are in full bloom all the winter; twenty varieties of cistus and narcissus, and twenty-five varieties of orchids, are to be found growing; also the pine, palm, mimosa, eucalyptus, orange, pomegranate, myrtle, olive, fig, honeysuckle, jasmine, acacia, cactus, &c., grow there in profusion. There are nice walks, either along the shore or up the valley of the Garonne, into the Esterel Mountains; also excursions to places of interest round about.

ST. PANCRAS RECREATION GROUND.—The Select Committee of the House of Commons appointed to inquire into the Midland Railway Bill, in considering the proposals of the Company in respect to the acquisition by them of a recreation ground at St. Pancras, have decided that in addition to the whole of the land originally proposed being used for a recreation ground the Company should also pay a sum of £1200 to the London County Council.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Uxbridge Rural District.—After making the necessary corrections for institutions within the district, Mr. C. Roberts gives the death-rate for last year as 15·6 per 1000. Infant death is excessive, and it is held that some legislative interference is needed as regards the insurance of the lives of newly born infants. The drainage of the village of Norwood is now almost completed, and it is to be hoped that the cesspits will be got rid of as speedily as possible. Defects as to water-supply and drainage were in Hayes found to be associated with diphtheria and enteric fever; Ruislip still remains without proper means of drainage; and in other places, such as Cowley, difficulties in connexion with water-supply have been met with. The joint isolation hospital received 33 patients during the year; and it is reported that certain sanitary improvements have been effected generally and especially in Southall and in Harefield.

Caxton and St. Neots Combined District.—Speaking generally of the water-supply of these districts, Mr. Poyntz Wright states that great difficulty is met with as regards the rural areas; whereas, by means of the East Huntingdon waterworks, the town of St. Neots may shortly be expected to have an abundant and a wholesome supply. It is also to be hoped that several villages in the rural districts, through which the mains run, may before long be benefited in the same way. As to others, the different methods of possible supply are discussed at some length, the question being obviously an important one; and this the more so because of the frequent risk to which local wells are subjected by reason of cesspools, leaky house drains, &c. The establishment of a small joint isolation hospital on the outskirts of St. Neots is strongly advocated. During 1888 the death-rates from all causes were as follows: Caxton and Arrington rural district 14·3, St. Neots rural district 13·1, and St. Neots urban district 13·3 per 1000 living.

Ilkley Urban District.—Dr. Thomas Scott contrasts the present sanitary state of Ilkley with that which prevailed in 1871 as regards water-supply, sewerage, burial ground, and hospital provision, all these matters being now in an efficient state; and he may justly lay claim to a share in promoting measures such as these, which have tended to the health and well-being of the town. Last year the death-rate, after elimination of visitors, was only 10·4 per 1000; the cold summer having been more favourable to the vital statistics than to the financial prosperity of this holiday resort.

Teignmouth Urban District.—Though much sanitary work is reported to have been effected in this district during the past year, much still remains, according to Dr. Piggott, to be done. A new bore-hole for water has been completed, and the supply now available is stated by Dr. Frankland to be of the first quality. The new sewerage system works well in all the localities to which it has been applied, but the internal sanitary state of a large number of houses remains most defective. For a town like Teignmouth, it is most discreditable to find that in 307 houses having so-called waterclosets there is no flushing apparatus whatever to the closets, and some of these structures have not unnaturally been found to be the medium of spreading the contagium of enteric fever. A large amount of highly useful work is shown to have been performed in the nuisance department, and disinfection is efficiently carried out by means of a solution of perchloride of mercury coloured with aniline blue. Making a deduction for visitors, the annual death-rate from all causes is given as 14·6 per 1000; the so-called zymotic rate was 0·41 per 1000; and the deaths of infants under one year of age were at the rate of 111 per 1000 registered births.

Taunton Urban District.—Dr. Alford congratulates the borough on a low death-rate, and this especially from zymotic diseases, which in former years were somewhat formidable. The water-supply is pure and abundant, and the flushing of sewers is well carried out. But sewer ventilation is far from satisfactory, and advice to deal with the matter is disregarded. Dwelling accommodation has much improved, but in some central parts of the town houses were found to be in a deplorable state as regards water-supply and drainage. The general mortality was 15 per 1000 living, and the zymotic rate 0·5 per 1000. The sanitary hospital, which belongs jointly to the urban and rural authorities, received 38 patients during the year, 24 being cases of scarlatina. Such enteric fever as was found in the district was due to the use of polluted well water, and seven cases of impure water are recorded as having been dealt with. In the *Rural District* the general mortality was at the rate of 15·6, and the zymotic mortality at the rate of 0·7 per 1000. As to villages, Dr. Alford seems to object to systems of sewerage, preferring that every householder should deal with his own sewage on his own premises. But he admits that, instead of a scheme, which is, as a rule, most difficult of proper application, the tendency is to large cesspits.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5813 births and 3712 deaths were registered during the week ending April 6th. The annual rate of mortality in these towns, which had been 21·3, 20·8, and 19·9 per 1000 in the preceding three weeks, rose again last week to 20·3. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·9 per 1000, and was 2·8 below the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 12·9 in Brighton, 16·3 in Portsmouth, 17·3 in Leicester, and 17·4 in Halifax. The rates in the other towns ranged upwards to 26·4 in Oldham, 27·8 in Manchester, 30·0 in Preston, and 30·6 in Blackburn. The deaths referred to the principal zymotic diseases in these towns, which had been 469 and 421 in the preceding two weeks, rose again last week to 464; they included 175 from measles, 125 from whooping-cough, 48 from scarlet fever, 48 from diarrhœa, 47 from diphtheria, 21 from "fever" (principally enteric), and not one from small-pox. These zymotic diseases caused the lowest death-rates in Derby, Halifax, and Huddersfield; and the highest rates in Blackburn, Preston, and Bolton. The greatest mortality from measles was recorded in Bristol, Norwich, Manchester, Preston, Blackburn, and Bolton; from whooping-cough in Birmingham, Nottingham, Wolverhampton, Plymouth, Bolton, Oldham, Bradford, and Preston; from scarlet fever in Oldham, Blackburn, and Sheffield; and from "fever" in Preston. The 47 deaths from diphtheria in the twenty-eight towns included 26 in London, 4 in Salford, 3 in Manchester, 3 in Liverpool, and 2 in Sunderland. No death from small-pox was registered in any of the twenty-eight great towns; and only 1 small-pox patient was under treatment at the end of the week in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum and London Fever Hospitals at the end of last week was 580, against 569 and 579 in the preceding two Saturdays; 47 cases were admitted to these hospitals during the week, against 58 and 41 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 402 to 332, rose again last week to 364, but were 110 below the corrected average. The causes of 82, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Sunderland, Leicester, Bolton, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 25·4, 23·4, and 22·1 per 1000 in the preceding three weeks, further declined to 21·8 in the week ending April 6th; this rate exceeded, however, by 1·5 per 1000 the mean rate during the same period in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 7·3 and 15·4 per 1000 in Greenock and Aberdeen, to 22·4 in Paisley and 28·8 in Glasgow. The 558 deaths in the eight towns showed a further decline of 7 from the numbers in recent weeks, and included 41 which were referred to whooping-cough, 31 to measles, 8 to diphtheria,

6 to diarrhœa, 3 to "fever" (principally enteric), 1 to scarlet fever, and not one to small-pox; in all, 90 deaths resulted from these principal zymotic diseases, against 85 and 92 in the preceding two weeks. These 90 deaths were equal to an annual rate of 3·5 per 1000, which exceeded by 1·0 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 31 and 37 in the preceding two weeks, further rose last week to 41, and included 29 in Glasgow, 5 in Edinburgh, and 4 in Dundee. The deaths from measles, which had been 45, 33, and 36 in the previous three weeks, declined last week to 31, of which 28 occurred in Glasgow. The 8 deaths referred to diphtheria showed an increase of 4 upon the number in the previous week, and included 6 in Glasgow and 2 in Dundee. The fatal cases of "fever" and of scarlet fever were considerably below the average; and the 6 deaths attributed to diarrhœa included 4 in Glasgow and 2 in Aberdeen. The deaths referred to the principal diseases of the respiratory organs, which had been 173, 132, and 137 in the preceding three weeks, further declined last week to 124, and were 18 below the number in the corresponding week of last year. The causes of 62, or more than 11 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·3 and 27·6 in the preceding two weeks, declined to 25·7 in the week ending April 6th. During the thirteen weeks of last quarter, the death-rate in the city averaged 28·6 per 1000, the mean rate during the same period being 19·5 in London and 19·0 in Edinburgh. The 174 deaths in Dublin showed a decline of 13 from the number in the preceding week; they included 2 which were referred to measles, 2 to "fever," 2 to whooping-cough, 1 to diphtheria, and not one either to small-pox, scarlet fever, or diarrhœa. Thus the deaths from these principal zymotic diseases, which had ranged in the previous four weeks between 15 and 8, further declined last week to 7; they were equal to an annual rate of 1·0 per 1000, the rates from the same diseases being 2·3 in London and 1·2 in Edinburgh. The 2 deaths from "fever" showed a further decline from the numbers in recent weeks; and the 2 from measles were fewer by 2 than the number in the previous week. The fatal case of diphtheria was the first recorded in the city since the beginning of the year. The deaths of infants showed a marked decline from the number in the previous week, while those of elderly persons exceeded the number in the previous week by 3. Five deaths from violence and 4 inquest cases were registered; and 67, or more than a third, of the deaths occurred in public institutions. The causes of 15, or more than 8 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon Herbert Crowley Dent has retired upon temporary half pay on account of ill health (dated March 31st, 1889).

ARMY MEDICAL RESERVE OF OFFICERS.—Acting Surgeon Geo. Gordon Sparrow, 1st Volunteer Brigade, Southern Division, Royal Artillery, to be Surgeon, ranking as Captain (dated April 10th, 1889).

INDIAN ARMY.—The Queen has approved of the retirement of Surgeon-Major R. Crossing Thorpe, M.D., Bombay Medical Establishment, being antedated to April 14th, 1883.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Deputy Inspector-General of Hospitals and Fleets Francis William Davis has been placed on the Retired List, at his own request, with permission to assume the rank of Inspector-General of Hospitals and Fleets (dated April 4th, 1889).

VOLUNTEER CORPS.—The *London Gazette* of the 9th inst. contains the names of 341 medical men who have been granted rank under Army Order 77 of 1889. The rank in each case will bear date Feb. 1st, 1889. The appointments are as follows:—65 Surgeons-Major, ranking as Lieutenant-Colonels; 101 Surgeons-Major, ranking as Majors; 1 Honorary Assistant Surgeon, promoted to the rank of Surgeon; and 174 Acting Surgeons, promoted to the rank of Surgeon.

Correspondence.

"Audi alteram partem."

ROYAL COLLEGE OF SURGEONS: THE DRAFT BILL.

To the Editors of THE LANCET.

SIRS,—I have the honour to forward you the amended draft of the Bill to be introduced into Parliament to amend the constitution of the Royal College of Surgeons. The enclosed is the form finally adopted at a full meeting of the Parliamentary Committee appointed by the meeting of Fellows and Members of the 28th ult., the committee meeting having been held on Thursday, the 4th inst., Mr. T. Holmes in the chair. It is intended at once to press the Bill forward in the House of Commons.

I am, Sirs, your obedient servant,

WM. ASHTON ELLIS,
Hon. Sec. to the Committee.

Grosvenor-road, Westminster, April 10th, 1889.

Draft Bill to Amend the Constitution of the Royal College of Surgeons of England.

Whereas it is expedient to amend the constitution and government of the Royal College of Surgeons of England and to declare and give effect to certain of the rights of the Members thereof, be it enacted, &c.

1. No Member of the said College shall hereafter be disqualified from being elected to, or holding, any place or office in the College by reason of his not being a Fellow of the College, except as hereinafter provided.

2. The President, Vice-Presidents, and Council of the College shall be elected by the Members of the College, but the Council shall be empowered to provide by bye-law that no Member who shall be of less than ten years' standing shall exercise the said electoral franchise unless he has been admitted to the Fellowship of the College.

3. The Members are and shall be entitled freely to meet together within the College at all reasonable times, to consider and resolve concerning the affairs of the College, and any resolutions passed at any such meeting by a two-thirds majority of the Members voting, concerning the bye-laws or the expenditure of the College, shall be binding on the Council.

4. Section 17 of the bye-laws of the College, and all action taken or to be taken thereunder, is hereby declared to be invalid.

5. So soon as may be after the next annual election for the Council, the Council shall make such provision by bye-law as may be necessary for fully carrying out the provisions of this Act, and shall have power therein to provide that not more than a fixed number of places on the Council, not being less than six, shall be filled by Members who are not Fellows of the College, and that such Members shall be of twenty years' standing or of such less standing as the Council may deem sufficient, and the Council shall forthwith provide by bye-law for voting at any election by voting papers, and shall have power from time to time, by bye-law, to amend the manner of election of Examiners, and to alter the said distribution of places on the Council, and to shorten the term of office of the members of the Council—provided always that no such bye-law shall be binding until it shall have been adopted by a general meeting of the College.

To the Editors of THE LANCET.

SIRS,—At the special meeting of the Birmingham and Midland Counties Branch of the British Medical Association, held on the 3rd inst., Mr. Lawson Tait, in moving his resolution approving of the Bill about to be introduced into Parliament, made the following statement, which, in spite of contradiction, was not only adhered to by him, but accepted by very many of those present—viz., "that the majority of the Members of the College were precluded from obtaining the Fellowship by the extra certificates required of them prior to admission to the examinations, including one of two years' extra study at a hospital recognised by the College." In order to correct this erroneous impression, which, to my surprise, I found to exist in the minds of many who should be better informed, I ask you to kindly insert the enclosed letter from the Secretary of the Royal College of Surgeons of England.

I am, Sirs, yours faithfully,

Birmingham, April 10th, 1889. F. MARSH, F.R.C.S.

[COPY.]

Royal College of Surgeons of England, Lincoln's-inn-Fields, London, W.C., 9th day of April, 1889.

MY DEAR SIR,—In reply to your letter of the 8th inst., inquiring what are the conditions on which Members of the College are admissible to the examinations for the Fellowship, I have to refer you to Section II. of the enclosed Regulations, from which you will see that a Member of the College is admissible to the first professional examination without the production of any certificates and to the second professional examination, after passing the first examination, on producing evidence of having been engaged not less than six years in the study or study and

practice of the profession—i.e., practically, on showing that he has been engaged in the practice of the profession for two years subsequently to his obtaining his diploma as a Member; and that no further certificates of attendance on the practice of a recognised hospital are required.

I am, dear Sir, yours faithfully,

F. Marsh, Esq. EDWARD TRIMMER, Secretary.

HOW DOES SUSPENSION ACT IN LOCOMOTOR ATAXY?

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 30th there is an account of a discussion which took place at a recent meeting of the Paris Society of Medicine on the question whether there was any satisfactory explanation of the results obtained in tabes by suspension. No plausible explanation, however, appears to have been forthcoming, and I therefore request your insertion of the following lines, in which I will attempt to account for the striking therapeutical effects which are obtained here as elsewhere by the use of suspension in such cases.

1. It has been ascertained that in tabes posterior spinal meningitis habitually accompanies the pathological changes in the nerve tubes of the posterior columns. The pia mater is found congested and thickened at the level of the posterior columns, the spinal fluid being unduly increased, and this change being more pronounced in the dorso-lumbar than in the cervical region of the cord. Now I maintain that the good effects which are sometimes obtained by cauterisation of the spine in such cases are rather owing to its revulsive influence on the meningitic process than on the sclerosis of the nerve tubes; and it appears to me highly probable that part of the influence of suspension, by which the spinal cord is efficiently stretched, is owing to the *breaking down of adhesions from chronic meningitis*, thus allowing a freer transmission of nervous influence along the nerve tubes, more especially those which run on the surface of the posterior columns. This explanation appears to me also to account for the fact that suspension acts better in advanced than in fresh cases of locomotor ataxy. In recent cases there is more tendency to inflammatory irritation, which may be made worse by stretching, just as recent cases of disease of the joints, tendons, ligaments, &c., are improved by rest, and old cases by forcible extension.

2. The morbid process in the posterior columns and nerve roots consists essentially of destruction of the medullary sheath and the axis cylinder of the central nerve tubes, together with overgrowth of the interstitial connective tissue or neuroglia which cements the nerve fibres. The neuroglia, from being originally soft and yielding, gradually, as the disease progresses, loses its cells and nuclei, becomes firm, hard, and fibrous, and is liable to cicatricial shrinking. The gradual contraction of this tissue causes compression and squeezing of the central nerve tubes, and thus serves to impair their nutrition and conductivity. Now it seems to me allowable to assume that, by the process of stretching the spinal cord, *the overgrown and unduly hardened neuroglia may be loosened and broken down*, with the effect that those nerve tubes which have to some extent survived the sclerotic process are freed from compression, become better nourished, and may thus be enabled to transmit the nervous influence more efficiently than before. Apart from this, however, I have come to the conclusion that suspension has, in a number of cases, a beneficial influence on the medulla oblongata, as it stimulates the centres for vaso-motor and cardiac action and for digestion. In several patients whom I have submitted to this treatment, I have noticed that the pulse, which was unduly quick and of low tension before they were suspended, fell by six or eight beats, and acquired more tension after they had been taken down. In a large majority of my cases the appetite and digestion have improved, and mental depression has been lessened or removed.

The forms of nervous disease for which my personal experience leads me to think that suspension is applicable are the following:—1. Locomotor ataxy in the second stage. 2. Paralysis agitans. 3. Spastic spinal paralysis. 4. Amyotrophic lateral sclerosis. 5. Functional nerve prostration, more especially where there is feeble action of the heart; loss of appetite; and severe mental depression.

I am, Sirs, yours faithfully,

Harley-street, March 30th, 1889. JULIUS ALTHAUS, M.D.

METROPOLITAN SEWAGE DISPOSAL.

To the Editors of THE LANCET.

SIRS,—I am sorry to find that Dr. Corfield refuses either to withdraw or to substantiate his assertions. In future I hope he will be more careful as to his statements. I trust, however, you will allow me space for a few remarks on your editorial article. In the first place, I have to acknowledge that I was certainly mistaken in stating that the use of manganate had not been thought of at the time of the Royal Commission. Its use had, as you correctly state, been brought to the notice of the Royal Commission by Mr. Dibdin. He had, however, but a very limited experience of the use of manganate at the time, and brought it forward far less prominently than he would have done some years later. Indeed, at that time the price of crude manganate was almost prohibitive, ranging from £30 to £40 per ton, with a strength very rarely above 18 per cent. available manganate, and frequently as low as 10 per cent. or even less, and no strength guaranteed. At the present time, thanks mainly to Mr. Dibdin, manganate of 25 per cent. may be had in any quantity at £7 10*s.* the ton, or about one-tenth of the former price. Secondly, I must repeat that taking one step, the first of two recommended, and being prepared to take the second if it were ultimately found necessary, while spending not a single penny, which would not have been required if the second step had been taken at once, is not going counter to the recommendation of the Royal Commission.

The main points insisted on in my letter are—(1) that two out of the three alternative schemes proposed by the Royal Commission can be carried out with the present plant without loss; and (2) that the plan adopted by the late Metropolitan Board of Works is by far the cheapest brought forward up to the present time. Your editorial article practically admits both points.—I remain, Sirs, yours &c.,

The Laboratory, Westminster Hospital, April 8th, 1889. A. DUPRÉ.

*** Dr. Dupré frankly acknowledges his error in regard to manganate of soda, but claims that we have admitted the points raised in his previous letter. To this we demur. We cannot strengthen our previous argument, to which Dr. Dupré has offered no reply, but must content ourselves with asserting once more that the Board evaded both in letter and spirit the advice of the Royal Commissioners—advice given with full knowledge of all the facts. We never denied that the system which has been selected was cheap, but merely contended that it was nasty. Dr. Corfield is well able to defend himself, but we may suggest that in a letter confessing a serious error on which an important argument was founded, it is scarcely wise to advise your opponent to be "more careful as to his statements." As to the Board, it is dead; and we hope that many of its methods will perish with it.—ED. L.

BONE-SOFTENING IN GOATS.

To the Editors of THE LANCET.

SIRS,—I observe in your last issue that at a meeting of the Pathological Society of London Mr. W. G. Spencer introduced the subject of bone-softening in goats. The cases referred to are identical in character with several which came under my personal observation about six years ago, and the particulars relating to which were published at the time in the veterinary periodicals. The subjects were all about two years old, and had the free run of a large horse establishment, consequently they were generously fed on oats, beans, &c., and were in good condition. In each case my attention was called to the animals on account of inability to masticate food, owing, it was thought by the attendants, to their having received an injury to the lower jaw. Recognising the nature of the malady, I advised slaughter of the animals. This was carried out, and the post-mortem examination revealed conditions identical with those described by Mr. Spencer, with the unimportant exception that the morbid changes were not quite so symmetrical as in Mr. Spencer's cases. The malady has for long been recognised amongst veterinarians as osteo-porosis; and, while this term only serves perhaps to mark our ignorance of its real nature, it distinguishes the disease from other forms of bone softening, such as mollities ossium and

rickets, with neither of which has it any feature in common beyond the softened condition of the bone and, in some degree, in its porosity. Rickets in young sheep is very common in certain poor districts of England and Scotland, but both in its clinical and pathological characters it differs essentially from the malady under discussion.

I am, Sirs, yours truly,

THOMAS WALLEY,
Principal.

Royal Veterinary College, Edin., April 8th, 1889.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Respite of Charles Parton.

THE Home Secretary has given effect to the recommendation of the jury and the memorials forwarded to him on behalf of the convict Charles Parton, who will in all probability spend the remainder of his life in penal servitude. The chief point of medical interest in the case is the use of chloral for criminal purposes, which is at least rare, if not unique. The experience of criminal courts shows that a novel method of crime, and especially a poison seldom used previously, is apt to find a host of imitators among those of the criminal classes who are not to be deterred even by penal servitude for life, or even the gallows, when excited by cupidity, lust, or other motive. Hence the importance of safeguarding so far as is possible the sale of chloral. Parton obtained it by theft, but it was open to him to have purchased it had he wished, the only restriction as to quantity being at the discretion of the chemist to whom he applied. It is to be hoped that the whole medical history of the case will be given to the medical press in all its details, as it is full of instruction and interest to house surgeons, pathologists, medical jurists, and the profession generally.

The Health of Wavertree.

Dr. Harvey, the medical officer of health for Wavertree, has issued his report for the year 1888. Fifty years ago Wavertree was a small village, whose name was spelt and pronounced "Wa'tree," to which invalids and children were sent from Liverpool for convalescence from fevers and other ailments. It is rapidly becoming part of Liverpool, but Dr. Harvey's report shows how healthy a near suburb of so large a town as Liverpool may be made by careful attention to sanitation. He estimates the population for 1888 at 14,300, being an average of 5½ persons per inhabited house; 201 deaths from all causes were registered during the year, a decrease of 71 as compared with the previous year, a death-rate of 14·05 per 1000. With the exception of 1879, when it was 13·4 per 1000, the death-rate for 1888 was the lowest for ten years past. During the year there were reported to him 16 cases of typhoid fever, of which 5 were fatal. Of scarlet fever 48 cases were either reported or came to his knowledge, only 3 of which proved fatal; of 11 cases of diphtheria, 3 were fatal; while only 1 death took place from measles, a striking contrast to the previous year, in which there were 26 deaths from this disease. There was not a single case of small-pox, and it is interesting to note that, of the total of 415 children born, 347 were successfully vaccinated, 26 died unvaccinated, 21 were postponed, 2 had removed to other districts, and the addresses of 12 were unknown, leaving only 7 cases in which the certificate had yet to be received.

Death of Mr. Watling, M.R.C.S.

Within the last few days Mr. John William Henry Watling has passed away. He commenced practice in Wavertree forty-eight years ago, and till very recently held the offices of parochial district medical officer and public vaccinator. He was much respected, and his funeral was attended by many of the leading inhabitants.

Accident to Dr. Twyford of St. Helens.

Last week Dr. Twyford, a leading practitioner at St. Helens, and J.P. for Lancashire, received very severe injuries from a carriage accident. It has fortunately turned out that Dr. Twyford's condition is less serious than was at first feared, and from the recent reports he is evidently progressing favourably.

Two Cases of Poisoning.

The city coroner held inquests to-day in two cases of poisoning. In the first a brickmaker added one more to the many victims of carbolic acid poisoning, he having taken it in mistake for whisky. In spite of medical assistance he died in the workhouse hospital soon after taking the poison. The other case was that of laudanum poisoning. The deceased, a married woman aged fifty-seven, living apart from her husband, had become recently strange in her manner, and was found on Sunday morning, by her landlady, in bed, breathing with difficulty, a bottle labelled poison being near the bed. Medical assistance was procured; but, in spite of all efforts, death took place.

Liverpool, April 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle.

A PUBLIC MEETING of the working men of Wallsend and Willington Quay districts has been convened to consider the desirability of establishing an infirmary for the district. It is not unlikely that the workmen of these large industrial centres will soon accomplish their aims in this respect, seeing that their brethren on the opposite bank of the Tyne have long since provided adequate medical accommodation for their sick and disabled.—The annual meeting of the Newcastle Invalid Society has been held. This society does a large amount of useful work for the sick poor at a small outlay. It provides and lends such articles as air- and water-beds, bath chairs, &c., not only to the sick poor of Newcastle and its suburbs, but also to patients in distant parishes of Northumberland and Durham, and it has sent from sixty to seventy poor people to the country or seaside, and these sojourns have been of great benefit to the poor.—I notice that Mr. T. F. May, a highly respected general practitioner in Newcastle, has been presented with an address and handsome testimonial by the workmen of the Elswick Coal Company's ambulance class. Mr. May has been the chief surgeon to the company for many years, and for the last four years he has given gratuitous ambulance instruction to the men.

High Death-rate at Alnwick.

At the last meeting of the Alnwick Local Board, Dr. Easton, the medical officer of health, stated that the mortality of the past month was equivalent to an annual rate of 52 per 1000 of the population, while the birth-rate for the same period was only 19. It was proposed and carried at the same meeting to inquire into the cause of this extraordinarily high death-rate.

Middlesbrough.

The annual court of governors has been held of the North Riding Infirmary, Middlesbrough, and the report showed that the number of in-patients treated had been 694, or 100 more than in 1886, which had hitherto held the highest record. The out-patients were 1106, an increase of 99 on the previous year. The gross receipts of the late bazaar were £1354, which, after deducting expenses and paying off a debt of £634, left a balance to the credit of the current year of £487. A vote of thanks was passed to the house surgeon and other officers for their services during the past year.

Newcastle-on-Tyne, April 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

The Craiglockhart Hills.

SOMEONE greatly interested in the question of the Craiglockhart Hills and the Royal Asylum recently took the trouble to make excursions to the seven (or eight) Edinburgh hills of which so much has been talked and written of late. The results of these rambles are given in an article in the *Scotsman* of April 8th. The writer of this article considers that far too much fuss has been made about the benefits conferred on the citizens of Edinburgh by the acquisition of all the hill ground, and he points out that open spaces near crowded dwelling places are utilised to an enormously greater extent than are these high grounds which surround the city. He says of one of his excursions: "What was our amazement and disgust to find only a dozen on the Castle

ramparts, a hundred or so on the Carlton-hill, and a few hundreds on the higher slopes of the Salisbury Crags and Arthur's Seat, a score or two on Blackford, six boys on the Braids, and just two old gentlemen trying to breast the northern slope of Eastern Craiglockhart, while not one curious or covetous citizen was prospecting the newly offered Western Craiglockhart to see if the goodly prospects and the fresh air of its summit were worth the £280 a year which it is to cost the city." He then goes on to compare these few wanderers with the large numbers of men, women, and children who simply swarmed and looked happy in the lower lying but more accessible Harrison-park and meadows. Anyone who has rambled around Edinburgh will be able to bear this out most completely, and it certainly does seem not only unreasonable but unjustifiable to keep out from the eighth hill large numbers of folk, feeble in mind and body, who can, and do at present, use this one hill more than all the other seven, which are frequented by the whole of the citizens of Edinburgh. It is to be hoped that wiser counsels will prevail, and that even the £350 now offered by the town will be insufficient to tempt the city parish managers to deprive the poorhouse and asylum inmates of what has to them been an inestimable boon.

The late Mr. Robert Hogue, Dentist.

On the first of the month there passed from amongst us the patriarch of the dental profession in Edinburgh. Mr. Robert Hogue was ninety-seven years of age, as he was born on Dec. 6th, 1792. Few men have the opportunity of seeing so many changes in any profession as Mr. Hogue saw in that of dentistry; and certainly few men have been able to add so much and to keep themselves so thoroughly abreast of all advances as he has. Several operations were devised by him, and numerous instruments and appliances used in modern dentistry owe their introduction to the skill and ingenuity of a man who found the dental surgery of the period at which he entered it, comparable to the present-day art and science, pretty much as was the art of the barber a couple of hundred years ago to present-day surgery.

Medical Examinations at the University and Colleges.

During the last fortnight examinations have been going on in the University and in the Colleges for medical degrees and diplomas. The official list of passes at the first professional examination was published this morning. The lists of the second professional passes are appearing each day, and the examinations for the triple qualifications are also in full swing. There certainly seems to be no falling off in the numbers of candidates presenting themselves for examination at the various boards, but the percentage of failures appears to be, if anything, rather higher than usual.

Edinburgh, April 9th.

GLASGOW.

Health Statistics.

During the fortnight ending March 23rd there were registered in Glasgow 634 deaths, representing a death-rate of 31·2 per 1000 living, in place of 27·9 in the previous fortnight. As compared with the corresponding period of last year, the death-rate was 4·2 per 1000 higher, a difference wholly due to the present epidemic fatality of measles and whooping-cough. Of the total deaths in the past fortnight 51·2 per cent. occurred in those below five years of age; of 72 fatal cases of measles, 68 were children under five years, the average age being 19·8 months; of 41 fatal cases of whooping-cough, 35 were children below five years, their average age being only seventeen months and a half. This enormous mortality from these affections is due chiefly to the prevailing north-east winds, and also to the fact that the lower and poorer districts of the city are now involved in the epidemic.

Spring Professional Examinations.

No fewer than 715 men are up for examination at the University at present—433 for the preliminary, 130 for the first professional, 66 for the second, and 86 for the third.

Wretched and Insanitary Dwellings.

From a report presented to the Town Council by its Health Committee, it is clear that, notwithstanding the twenty years' existence of a City Improvement Trust, and the levying of an Improvement Tax of from 2*d.* to 6*d.* in the pound for that length of time, not a little remains to be done in the way of housing the very poor in such a manner that ordinary cleanliness and morality become at least possible.

A Year's Crime in Glasgow.

The criminal statistics for 1888 may be read in connexion with the report just referred to on insanitary dwellings; there is probably some sort of connexion between them. In Glasgow the apprehensions last year numbered 47,960, being an increase over the previous year of 3102, consisting of 209 cases of crime and 2893 offences. Compared with the last ten years, the year 1888 occupied a very bad pre-eminence. It was the second highest in the decade, and was 7116 above the year 1885 and 10,094 above 1879. These figures were absolutely appalling, the apprehensions in Glasgow being equal to 8¾ per cent. of the entire population, and if those under thirteen years were excluded the apprehensions would be equal to 12½ per cent. of the adult population. The criminal returns for Edinburgh last year showed that there were 8186 apprehensions, being a proportion of 3·1 of the population, against 8¾ for Glasgow. The number of apprehensions in Edinburgh was the lowest for thirty-three years, and that for 1888 was an improvement even upon 1887, while Glasgow had to acknowledge that the tide of crime and offences seemed to be surging upwards and onwards.

It is stated that Dr. Wallace, late of Newton-place, has resigned the chair of Midwifery in Anderson's College. Partly on account of the state of his health, Dr. Wallace went to reside during the winter months in the suburbs of London; but he has now decided to begin consulting practice in the West-end of the metropolis.

Glasgow, April 9th.

ABERDEEN.

The Aberdeen University.

The graduation ceremony in Medicine took place at Marischal College on Wednesday, the 3rd inst. Principal Geddes addressed the graduates, of whom there were twenty-seven, who received the degrees of M.B. and C.M., and three gentlemen were promoted to the degree of M.D. Mr. A. R. Cushny graduated with "highest academical honours," and Mr. Angus McGillivray with "honourable distinction." The diploma in Public Health was conferred on Alexander L. Duke, M.B., C.M., John Wright Mason, M.B., C.M., and Surgeon-Major W. E. Webb, M.D. At the close of his address Principal Geddes said: "I trust, gentlemen, you will preserve a kindly feeling towards, and a loyal remembrance of, your *alma mater;* and though you are to leave her now, you will have the satisfaction of leaving the medical school flourishing as it never flourished before. I do not refer to the number of students, though they are multiplying, nor to the accession of buildings and laboratories which we look forward to as about to be added this summer to the University; but I refer to the excellent work done by the various medical professors, and especially to the splendid literary evidence of laborious and victorious research given to the world by two of their number,—the Professor of Natural History and the Professor of Pathology. I congratulate these gentlemen on their admirable productions, which have added to the fame of the University, and I congratulate the school in possessing upon its staff such expositors of science."—At a meeting of the Senatus held on Saturday, Professor Stephenson was re-elected Dean of the Faculty of Medicine. At the same meeting the Senatus accepted a portrait of the late Professor Brazier, presented on behalf of the medical students of 1888-89.

The Aberdeen Royal Infirmary.

At a recent meeting the directors of the Royal Infirmary resolved by a majority of 6 to 3 not to have "lock wards" in the new buildings. The subject is to be brought before a general meeting of the managers to be held on Friday.

Students and Infectious Diseases.

At a meeting of the Public Health Committee held on the 3rd inst., a letter was read from Professor Struthers on behalf of the Senatus of the Aberdeen University, asking whether arrangements could be made before the opening of the summer session on the 22nd inst. for the admission of students for clinical instruction to the City (Epidemic) Hospital. The committee, while agreeing generally as to the principle of admitting students to such institutions, thought it advisable, before coming to any decision on the question,

to have a report from Dr. Matthew Hay, the medical officer of health, as to the practice prevailing in other cities, such as Edinburgh, Glasgow, &c.

The Measles Epidemic.

The number of cases of measles reported last week was sixty, being eight less than previously reported.

Aberdeen, April 9th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Royal University of Ireland.

A MEETING of Convocation has been held for the purpose of electing two representatives on the Senate. There were three candidates—viz., Dr. Thomson, Dr. Sinclair, and Mr. Farrelly; the result of the voting being as follows—Dr. Thomson, 522; Dr. Sinclair, 493; Mr. Farrelly, 93. The following resolution was unanimously adopted: "That the meeting of Convocation desires to place on record its sense of the loss the University has sustained by the death of the Rev. Dr. Porter, President of the Queen's College, Belfast, and tenders to his widow and family its warmest sympathy and condolence in their bereavement." Some notices of motion were proposed by Dr. Roche, but, not being seconded, fell through, and the proceedings terminated.

Royal College of Surgeons in Ireland.

At a meeting of the Council last week, Messrs. Ledwich, Broomfield, and Knott were duly elected College Anatomists, on the understanding that the Scheme of Amalgamation of the Medical Schools comes into operation.

Conjoint Examination: Colleges of Physicians and Surgeons.

The committee of management have adopted a resolution in reference to the regulations of the Final Examination of the Conjoint Scheme between the two Colleges. This has been adopted by the Council of the College of Surgeons, and when similarly dealt with by the Fellows of the College of Physicians will permit candidates to present themselves for examination in the various subjects of the Final Examination at succeeding terms.

Adelaide Hospital, Dublin.

The managing committee are making a special appeal for funds to pay off a debt of some £3000 which has been incurred. The resources of the hospital last year fell below the average for many years by £1000, while the fitting up and furnishing of the Nurses' Home cost a considerable sum. The hospital is one of the finest and best managed in Dublin, and that the surgical work of late years has increased largely is evidenced by the fact that whilst in 1882 the capital operations numbered 85, last year they amounted to 313. As the committee point out, the hospital has now become a national institution, for patients from every county in Ireland are daily in its wards, as well as many admitted from Wales, England, and Scotland.

St. Patrick's (Swift's) Hospital for the Insane.

During last year the percentage of recoveries on the total number in the asylum was 10·98, and on admissions 52·63. The percentage of deaths on admissions was 36·84, and on the total number in asylum, 7·68. The principal forms of mental disorder in patients admitted during 1888 were recurrent mania, acute and chronic melancholia, and delusional insanity.

Monkstown Hospital, co. Dublin.

A Miss Hall having recently provided funds for the entire furnishing of one of the private wards in this institution, the ward in question has been entitled the "Hall Ward," and the donor elected a life governor. The committee propose to provide additional accommodation for lavatories and to erect an observation ward for doubtful cases.

Execution by Hanging.

Peter Stafford was hanged in Kilmainham Gaol yesterday for murder. He was eleven stone in weight, and the rope by which he was hung gave him a fall of six feet six inches. This was evidently too long a drop, inasmuch as the right side of the neck was torn from the windpipe to the back, rupturing the cervical muscles and the bloodvessels of the neck. The spinal cord was ruptured, and death must have been almost instantaneous.

Dublin, April 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Poisoning by Digitalis.

SOME of your readers will probably remember the case of Dr. Couty de la Pommerais, who about twenty years ago was condemned and executed on the charge of having poisoned his mistress, Madame de Pauw, with digitalis. This *cause célèbre* inspired Professor Brouardel with some curious reflections, which he gave utterance to in a lecture on toxicology recently delivered at the Faculty of Medicine, and which may be found interesting. There exists, said Dr. Brouardel, some flaw or uncertainty in this affair. It is probable, he added, that the accused was really guilty. But the question remained as to whether Madame de Pauw was really poisoned with digitalis. It is unfortunately impossible to isolate this vegetable poison by chemical reagents; it was therefore necessary in this case to have recourse to physiological tests. With extracts taken from the body of the victim, a frog was poisoned; it died with the heart in a state of systole. A dog was also injected with two grammes of an extract which had been obtained by scraping the floor which was soiled with the vomited matter. At the necropsy, the ventricles of the heart were found contracted and the auricles dilated. It was concluded from these experiments that Madame de Pauw had succumbed to poisoning by digitaline. Dr. Hébert, pharmacien of the Hôtel Dieu at the time, performed some very interesting experiments, with the view of enlightening the tribunal as to the real cause of death in this case, but no heed was paid to his representations. He showed that the extracts obtained from the scrapings of any wooden floor produced the same phenomena. He stated that, when organic matters are in a state of decomposition, there are produced toxic substances which he did not know, but the action of which killed frogs, in cardiac systole, as does digitalis. Now, however, observed Dr. Brouardel, we know that these organic matters may produce alkaloids, the character of which approaches to a large extent that of vegetable alkaloids, and which are termed "ptomaines."

Two Cases of Laparotomy.

Dr. Pinard recently read a note at the Academy of Medicine on two Cases of Extra-uterine Pregnancy having evolved to the full term, for which he performed laparotomy in both cases about two months after the death of the fœtus. The patients did well after the operation and were quite cured. Dr. Pinard employed a saturated watery solution of naphthol, which he prefers to all antiseptics in vogue, as being less dangerous, at least in these cases. In a third case which had been previously communicated to the Academy, Dr. Pinard practised elytrotomy in preference to laparotomy. In these three cases the placenta, rendered aseptic, was left behind without evil results.

Dr. Schwartz's Scientific Mission.

Dr. Schwartz has recently returned from his scientific mission to Austria, Germany, and Russia, an account of which he read before the Medical Society of the Sixth Arrondissement. He said he had visited the hospitals and the clinics of Vienna, Warsaw, Moscow, and of St. Petersburg, where he had seen the most daring operations performed. Professor Sclifassowski, one of the most celebrated surgeons of Russia, pupil of the great Pirogoff, performed an operation on a patient who had arrived the day before from Irkoutsk, in Siberia, a distance of 15,000 leagues. Dr. Schwartz admired the ability of the surgeons, and the organisation of certain clinics and hospitals. He was convinced, however, that French science had nothing to envy in other nations, and that the masters of the French school are at least as able and as successful as their neighbours.

Death of M. Chevreul.

The state of health of M. Chevreul had for some days been causing some anxiety among his friends, as he had been labouring under great prostration, and was not able to take nourishment. The venerable centenarian lost a son about a fortnight ago aged seventy years, but the sad event was not communicated to the father, as it was feared that the shock might be too great for him. On the 3rd inst. M. Chevreul returned from his visit to the Eiffel Tower, in the progress of which he had taken great interest, in a state of great exhaustion. His medical attendant was summoned,

who announced the end of the illustrious chemist to be at hand. From this time he gradually sank, and in the early morning of the 9th he quietly expired. M. Chevreul was born on August 31st, 1786. At the age of seventeen he became, after having finished his studies at the Ecole Centrale, assistant to the celebrated Vauquelin. In 1810 he became preparator of chemistry at the Museum of Natural History, and in 1813 professor of the Lycée Charlemagne and director of the manufactory of the Gobelins, where he distinguished himself for his researches on the rational application of colours. In 1826 he was elected Member of the Academy of Sciences in the room of Proust. In 1823 he was elected Member of the Academy of Medicine. He received the Grand Cross of the Legion of Honour in 1865. The most noteworthy studies of M. Chevreul were those upon fats of animal origin, and upon colours, their contrast and combinations.

Another Death from Hydrophobia.

The *Semaine Médicale* reports that G. Arenès of Soler, aged fifty years, who was bitten on January 26th, 1889, by a rabid dog, and treated at the Pasteur Institute from January 29th, died from hydrophobia on February 24th last.

Medical Congresses.

In addition to the International Congress on Therapeutics and Materia Medica, an International Congress of Hygiene and of Demography will be held in Paris from August 4th to 11th, 1889, at the Faculty of Medicine.

Precautions against Small-pox.

With the view of preventing as far as possible the importation of small-pox during the Exhibition, the Council of Public Hygiene of Paris have adopted the following resolutions:—1. All nomads, foreign merchants, or hawkers, jugglers, mountebanks, and others, who arrive in Paris for the Universal Exhibition should be vaccinated and revaccinated. 2. No license will be granted if these persons do not possess a certificate of such recent vaccination or revaccination.

Paris, April 10th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council of the College, held on Thursday, the 11th inst., the minutes of the ordinary Council meeting of March 14th were read and confirmed. The reports of the several annual committees were received, approved, and adopted. The Jacksonian Prize for the past year was awarded to Mr. Jonathan Hutchinson, jun., the subject being, "The Diagnosis, Effects, and Treatment of Injuries to the Epiphyses of the Long Bones." The Collegial Triennial Prize was not awarded. The determination of the subject for the next Collegial Triennial Prize was deferred to the next meeting of the Council. The following was the subject selected for the Jacksonian Prize for 1890: "The Nature and Treatment of Injuries to the Spinal Column, and the consequences arising out of them."

Preliminary arrangements having been agreed to, the unveiling of the statue of Her Majesty the Queen at the Examination Hall was authorised. The ceremony will probably take place on the 24th of May. It is hoped that His Royal Highness the Prince of Wales will consent to unveil the statue. This arrangement, however, is contingent upon the concurrence of the Royal College of Physicians.

Mr. John Marshall was appointed Morton Lecturer on Cancer and Cancerous Diseases for the present year.

The sum of £20 was voted as a donation towards extinguishing the debt on the Church of Holy Trinity, Little Queen-street.

A letter of the 3rd inst. from Mr. Wilde was read, enclosing a letter from Messrs. Burton and Co., proposing on behalf of Mr. Lawson Tait that all proceedings in Tait *v.* Savory should stand in abeyance until the action Steele *v.* Savory has been disposed of, and that Tait *v.* Savory should abide the result of Steele *v.* Savory. The President stated that he had, on behalf of the Council, authorised Mr. Wilde to agree to the proposal of Mr. Lawson Tait's solicitors.

The Secretary reported that, in pursuance of the resolution of the Council at their last meeting, the Formulæ for New Bye-laws had been forwarded on the 15th ult. to the Secretary of State for the Home Department for sanction and ratification.

The Library will be closed from the evening of April 18th to the morning of the 23rd.

Obituary.

JOSEPH ROGERS, M.D.

JOSEPH ROGERS was born at Westmeon, Petersfield, Hants, on Aug. 6th, 1820, where his great-grandfather, grandfather, father, and brother enjoyed an extensive practice for 120 years. He was the thirteenth of the sixteen children of Mr. George Vining Rogers and Mary Anne his wife. Of this large family thirteen were sons; of these, five entered the medical profession, and two were educated at Oxford, of whom one is the well-known Professor Thorold Rogers, late M.P. for Southwark. The subject of this notice was sent to the school of the late John Buller, of Southampton; but his father happening just then to suffer some pecuniary reverses, the boy was unfortunately removed in his fourteenth year, having acquired probably little beyond the power of expressing his views in very vigorous English, and habits of work and study, of all of which he made the fullest use in after days. And when his own energy and talents had begun to lead to success, we find him at once directing his powers to the improvement of the lot, not only of the recognised poor, but of those who at that time almost as much required help—namely, the medical attendants on the poor. Injustice and cruelty ever found him an unsparing foe. In the treatment of the sick poor and the maladministration of sanitary matters there was ample scope for his chivalry, and, from the circumstances in which he was placed, it was natural that he should acquire a bias in that direction. Accordingly, we find him associated with the public health movement so far back as the days of Lord Ashley (afterwards Lord Shaftesbury), Southwood Smith, and Edwin Chadwick, its pioneers—a period of over forty years. His life's work, indeed, was a long series of reforms in sanitary law and administration, and in wringing from tardy Bumbledom justice for its ministers.

On leaving school he became dispenser to his father; but in his seventeenth year he was transferred as an apprentice to a general practitioner in Westminster-road, London, and subsequently entered the Middlesex Hospital in 1838, where he distinguished himself by the earnestness with which he pursued his studies, and his success in the hospital prize competitions. On the completion of his curriculum he returned to his native village; but not for him was a village sphere, and a brief time found him again in London, in charge of his brother's practice. On that brother's death, which occurred soon after, he commenced practice on his own account. He was not long in finding work for his ardent reforming temper. A patient was suffering from blood poisoning. With his usual thoroughness, he must probe the matter to its very bottom. He found that the wall of the room in which the patient lived formed part of the wall of the graveyard of St. Anne's, Soho, and that that wall was saturated with, and even exuding, a highly putrid fluid. The graveyard itself was shamefully overcrowded. Having brought the matter before the vestry of the parish, he was appointed, in conjunction with two churchwardens, a custodian of the ground, which office he held for three or four years. The discoveries he there made induced him to extend his researches to other graveyards. He usually visited them on Sunday afternoons, that being in those days the favourite time for burials, and many were the scandalous facts he recorded as the result of those visits. So impressed was he with what he saw that he founded the "Anti-interment-in-Towns Association," of which the late William Alexander Mackinnon was President, and for a long while he worked in this cause without being aware that his labours had been forestalled by the late George Alfred Walker, of Drury-lane. When, with infinite labour, he had collected a great mass of statistics, he called a public meeting, which was very influentially attended, and succeeded in thoroughly arousing the public mind to the revolting details of burials in London, especially in private grounds. This led to an order in Council being issued by

Lord Palmerston, whereby many of them were closed, notably that of St. Anne's, Soho. Dr. Rogers was the first to induce a vestry to establish a mortuary. It cost him three or four years of continuous effort to effect this much-needed reform in the parish of St. Anne, and it long remained the solitary instance of such provision.

Having accomplished so much in this field, his reforming zeal took a new direction. Knowing the importance of light in the preservation of health, and seeing the pernicious effect of the window tax in lessening the number and size of windows, he took a very active part—it was not in his nature to take a passive one—in conjunction with Lord Duncan and others in procuring the abolition of that odious impost.

Cholera having broken out in the parish of St. Anne's, Dr. Rogers was appointed one of the supernumerary medical officers, and, there being a vacancy at the Strand, he was appointed (Jan. 1856) surgeon to the workhouse, at a salary of £50 a year, to include the supply of all medicines. It was a most momentous appointment, pregnant with blessings to the poor, with confusion to the administration. The condition of workhouse infirmaries at that time was deplorable, and that of the Strand was no exception to the rule. Some idea of it may be formed from the following facts. The house was licensed for 400 persons. The average number of inmates was 600, chiefly sick, parturient women, aged, infirm, and children. There was no skilled nurse, and 1*s.* 8*d.* per head per annum was the sum allowed by this Christian country for attending all these people, and providing them with medicines and appliances. Little by little, however, Dr. Rogers' determination and perseverance wrung from the reluctant board certain concessions, which made the condition of the wretched inmates somewhat less intolerable than before.

In 1861, Dr. Rogers gave evidence before a select committee of the House of Commons, when he pointed out the desirability of all medicines being provided by the guardians—a view which was partially adopted by the committee, and recommended in a circular letter by the department. Many boards adopted the recommendation, either wholly or at least with regard to the supply of expensive drugs.

The year 1865 revealed a shocking case of workhouse mismanagement. Timothy Daly, with chronic disease, entered the Holborn Workhouse. There being no nurse, the care of him devolved on sundry feeble and incompetent pauper women, by whom he was so neglected that he became covered with bedsores. His friends removed him, and he passed under the care of a dispensary medical officer. He died in a fortnight of exhaustion. At the inquest the revolting facts and system were exposed, to the disgust and indignation of an outraged public. A searching inquiry was the result. Dr. Rogers, foreseeing that an attempt would be made to uphold the system and to sacrifice the medical officer, Mr. Norton, tendered his evidence, which went to clear the officer and to condemn the system under which he worked.

Soon after this the proprietors of THE LANCET decided to issue a Commission to investigate the condition of workhouse hospitals in the metropolis. The principal commissioner, the late Dr. Anstie, availed himself largely of Dr. Rogers' assistance in pursuing his inquiries. Together they visited the Cleveland-street Workhouse, and the graphic account of their visit evoked an extraordinary feeling amongst the public and great wrath amongst the guardians of the Strand Union Workhouse, which was probably one of the worst in London. In December, 1865, at a dinner party at Dr. Rogers' house, the state of the Metropolitan workhouses was thoroughly discussed. At a subsequent meeting, held at Mr. John Storr's offices, Covent-garden, at Dr. Rogers' suggestion it was agreed to form an association, afterwards known as the "Workhouse Infirmaries Association." Money soon flowed in from all quarters, and the Association was joined amongst others by many members of both houses of Parliament. Shortly afterwards the solitary paid nurse of the Strand Union resigned, and asked Dr. Rogers to recommend her for hospital work. He introduced her to one of the secretaries of the Association, by whom she was requested to put in writing all that she had witnessed at the Strand. This she did, and her statement was handed to Earl Carnarvon, a member of the Association, who sent it to Mr. Charles Villiers, the then President of the Poor-law Board, with a request that the truth of her revelations should be made the subject of an official inquiry. This inquiry was held in the following June, when the evidence of the nurse, supported as it was by that of Dr. Rogers, caused a profound public sensation, as the result of which a series of questions was addressed by the Department to every metropolitan workhouse medical officer. The questions were artfully framed with the view of throwing the onus of the condition of the workhouse infirmaries upon the medical officers themselves. Dr. Rogers saw the snare, and forthwith convened a meeting at the Freemasons' Tavern of all the workhouse surgeons in London. There was a very large attendance, and it was resolved to form an association for the purpose of protecting their interests and character by enlightening the public mind as to the very small influence which it was possible for them to exert in mitigating the evils which had been exposed. Dr. Rogers was appointed chairman, and that was the parent of the Poor-law Medical Officers' Association of to-day, of which he has been the life and soul.

Meanwhile the labours of the Workhouse Infirmaries Association had borne fruit in a promise on the part of Earl Derby (who about this time became Premier) that the whole subject should be exhaustively dealt with in the next session of Parliament. In the following year (1867) Mr. Gathorne Hardy, the then President of the Poor-law Board, brought in the Metropolitan Poor Bill, by which he proposed to take powers to establish separate hospitals for infectious and non-infectious diseases, to institute dispensaries, to provide all medicines and appliances, and paid nurses, to appoint independent dispensers, to establish asylums for imbeciles, and to create district schools. Mr. Hardy generously admitted his indebtedness to Dr. Rogers for his advice and assistance in several of these subjects, especially as regarded the supply of medicines &c.

But Wendell Holmes's parable of the overturned flat stone and the horrible insect population new-exposed to the light of day was about to receive its aptest illustration. Dr. Rogers had turned over the stone of ancient abuse, and had shown to the world in all their ugliness the vermin that throve in the darkness. As might have been expected, there was a mighty squirming and wriggling. His evidence at the official inquiry had so exasperated the majority of his board, as well as some of the permanent officials of the Poor-law Board, that he was called upon to resign his office at the Strand Union, on the ground of incompatibility with his board, though the manner in which he had performed his medical duties was not impugned. A fortnight later an order came from the Poor-law Board dissolving the Strand Union, and adding St. Anne's to St. James's to make the Westminster Union, and St. Martin's to the old Strand Union, as at present. The compulsory resignation of Dr. Rogers evoked a considerable amount of public feeling and sympathy, as it was clearly recognised that he had been sacrificed to officialism.

In June of the next year, 1868, Dr. Rogers convened a general meeting of Poor-law medical officers at the Freemasons' Tavern, at which it was resolved to unite the remains of the old association founded by Mr. Griffin of Weymouth with the "Metropolitan Workhouse Association," thus forming the "Poor-law Medical Officers' Association," which has done so much for the Poor-law Medical Service. In connexion with that Association Dr. Rogers endeavoured, by lectures, by his pen, and by public addresses, to excite attention to the evils that arise from inefficient provision for public medical relief in Great Britain. With this object he traversed a large portion of the United Kingdom, addressing meetings of medical officers and guardians in a great number of the principal towns, with the result that in many, notably Birmingham, Southampton, Plymouth, Oxford, Cardiff, and others, a system was adopted analogous to that in the metropolis. His investigations and inquiries enabled him to demonstrate in the most convincing manner that wherever medical relief to the poor was efficient there was a diminished poor-rate, and, on the other hand, wherever the medical service was starved the total poor-rate was high and increasing. As one result of this education of the public, the late Mr. Brady, M.P. for Leitrim, brought in the Medical Officers' Superannuation Bill, which he succeeded in passing, Mr. Brady asserting that he could never have carried it but for the assistance afforded him by Dr. Rogers.

From the time of his enforced resignation Dr. Rogers remained four years without any official appointment. He then accepted the post of in-door medical officer to the Westminster Union. He worked fairly in harmony with

this board for ten years, but having complained of some officials, a majority of the board supported them against him. Eventually they went the length of suspending Dr. Rogers from his office. He was, however, restored by the Department, and at the following election of guardians the supporters of the officials lost their seats. From that time, until his health broke down, he worked in perfect concord with the new board, who handsomely acknowledged his services by voting him the largest superannuation allowance it was in their power to grant. Shortly after his election the medical profession had shown their appreciation of Dr. Rogers' labours in the cause of sanitary and Poor-law reform by presenting him, in June, 1884, at the Medical Society's rooms in Chandos-street, with a service of plate and a cheque for £150. The presentation was made by John Archibald Shaw Stewart, formerly treasurer of St. George's Hospital, who had ably assisted Dr. Rogers in many of his Poor-law medical reforms during the previous quarter of a century.

For the last ten years Dr. Rogers had devoted a large portion of his time to aiding in every possible way such members of the Poor-law Medical Service as happened to come in collision with their boards of guardians, and to obtaining consideration for their rights. For many years he was a member of the vestry of St. Anne's, where he was able to devise and carry out many administrative improvements.

Much of Dr. Rogers' success was due to the vigour and terseness of his writing and his entire fearlessness. It was only necessary to point out to him a wrong for him to attack it and its perpetrators; and so far as medical periodic literature or even the daily papers circulated, the culprits were gibbeted, utterly heedless of any reaction the punishment might produce upon himself or his personal interests. He was the most unselfish of men, and at all times ready to postpone his own affairs to those of anyone who needed his help. When so ill that his life was hanging in the balance, the writer of this sketch, on visiting him, found him propped up in bed transacting business for the widow of a professional brother. With the tenderness of a woman for the oppressed he combined the courage of a hero against the oppressor, and it may be safely asserted that he never cringed before mortal man, however exalted might be his rank or station. His energy and perseverance were untiring, and though, like all earnest men, he had occasional moods of despair, caused either by the apathy of those whom he sought to benefit or the difficulty of touching the dull cold ear of officialism, yet he was soon up again, and at his old work with unabated ardour. Instant in season out of season, in London, in the provinces, Scotland, Ireland, and Wales, his appeals to justice were heard. But even those appeals might have been as seed sown in barren soil had not his laboriously compiled facts incontestably proved that rates rise in direct ratio to the neglect of the sick poor. This it was which quickened the parochial soil to bring forth the desired fruit.

But, like so many of our noblest workers, he had suffered long from heart disease, associated with chronic bronchitis, and on Dec. 5th, the right pleura being full of fluid, it was decided to tap the chest. Two days later this was done, and three pints of serum were withdrawn. But it collected again, and just before Christmas Day four pints were taken away, leaving him very prostrate. But he rallied, and three weeks later, having had no fresh effusion, he was well enough to write a short letter. Thenceforward his life was uneventful. His work was done. He had retired formally since September, 1886, and had been awarded a superannuation allowance by a unanimous vote of the guardians, accompanied by the warmest expressions of sympathy and esteem. As soon as he was able to travel he went for a short sojourn on the Kentish coast, returning to London to a house that had been in the meantime prepared for him at Hampstead. There, in patient suffering, he awaited the end. On the morning of Wednesday, April 3rd, his mind unclouded, his thoughts active about his life's work, but never unmindful of his friends, he passed away.

A prince has fallen out of our ranks. Not that to him it was given to scale those mountain heights of fame whose path is strewn with men's bones and watered with widows' tears. Not for him was that glory which is expressed in glittering stars and sonorous titles, nor would we claim such distinctions for such a man. His fame is written in the hearts of ten thousand of his medical brethren, whose position and power for good he raised; and in the homes of the poor, whose miseries he laboured to alleviate. *Si monumentum quæris, circumspice.* Look round this England of ours—see the comparatively comfortable and well-appointed workhouse infirmaries, and think of the reeking dens they were. Compare them thirty—nay, twenty—years ago and now, and confess that if Howard was the Hercules of prison reform, as truly was Rogers the Hercules of workhouse reform. Verily, among practical philanthropists, who have not only talked but worked—worked through evil and through good report, through active persecution and cold neglect—there hath not arisen a greater than Joseph Rogers.

We understand that Mr. Fisher Unwin is about to issue a memoir of Dr. Rogers, written by his brother, Professor Thorold Rogers, and entitled "Reminiscences of a Workhouse Medical Officer."

FRANZ CORNELIUS DONDERS.

As we have already announced, this well-known physiologist and ophthalmologist breathed his last on the 24th ult. He was a man of commanding intellect and of great originality, and his name will long be remembered as the first surgeon who approached the subject of lenses as aids to vision in a truly scientific spirit, and who laid down principles which the labours of a succeeding generation have only served to establish more firmly and have found scarcely anything to alter or improve. He was born on May 27th, 1818, at Tilburg, in Noord Brabant (North Brabant), and entered at the age of seventeen as a pupil at the great Dutch Reichs-Hospital for Military Medicine and Surgery, and from 1835 to 1840 devotedly pursued the ordinary curriculum of the university. Then taking up the position of army surgeon, he practised first in Vliessingen and then in Haag; but having written a dissertation containing anatomical and pathological observations on the nervous centre, he removed to Leyden, and was appointed Lector Anatomiæ et Physiologiæ to the Royal Military Academy, which office he held till the year 1848, when he accepted the post of Professor Extraordinary to the Faculty of Medicine in the University of Utrecht, and his gift of teaching was recognised on all hands to be of an exceptional quality. His inaugural dissertation was upon the "Harmony of Animal Life," in which he pointed out the influence of habit, exercise, and heredity on the economy. The writings and observations of Schleiden on plants, and of Schwann on animals, showing the importance of cells, were at this time attracting great attention in all countries, and led him to devote himself to the microscopic and micro-chemical investigations of the tissues, in the pursuit of which he received the support of Mulder, one of the ablest of Dutch chemists. His results appear in the "Dutch Contributions to Anatomical and Physiological Knowledge." About this time he published a discourse on "Metabolism of Tissue as the Source of the Proper Heat of Plants and Animals," in the course of which he pointed out the importance of the skin as a regulator of heat, and in substance laid down the modern doctrine of the conservation of force. About this time his attention appears to have been first specially directed to the eye, the organ to which so much of his subsequent research was devoted. His first essay was on the "Movements of the Human Eye" (1846); his next on the "Position of Muscæ Volitantes in the Eye"; and several papers appeared in the *Netherland Lancet*, which he edited for twelve years, the most important being on the Use of Prismatic Lenses in the Treatment of Squint, on the Relation between Convergence and Accommodation, and on the Regeneration of the Cornea. In 1852 he became Ordinary Professor in the University, and from this time forwards devoted himself to ophthalmic practice. In 1862 Schroeder v. d. Kolk died, and he was immediately appointed Professor of Physiology, and found time to write a work on Physiology, the first part of which was translated into German by Theile—an excellent work in its day. It embraced circulation, absorption, digestion, respiration, and secretion. The second part, which should have contained the nervous system, with the special senses and development, for some unexplained reason never made its appearance. The *magnum opus* of Donders' life was, however, the treatise on the "Anomalies of Refraction and Accommodation," an excellent translation of which was published by the New Sydenham Society, and which constitutes one

of the most important of the many valuable works issued under their superintendence. In it the precise nature of the various errors of refraction were clearly described, and the means to be employed for their relief fully given. It can scarcely be said to be superseded by the larger works of later writers, and it thoroughly established his claim to be one of the most acute of clinical observers. His researches were, however, by no means confined to the eye. He published in rapid succession papers on the "Sound Colours of the Vocals," on "Speech," on the "Physiological Time of Psychical Processes," on the "Rhythm of the Cardiac Sounds," and others of equal value.

Professor Donders was a man of commanding presence, lofty stature, dark complexion, rugged features, with bright, kindly eyes, and much energy of manner and movement. He spoke English, not very fluently, but quite intelligibly; and amongst the many of all nationalities who mourn his death none regret him more deeply than his English friends and admirers, the number of whom was limited only by those with whom he was acquainted.

The following noble tribute to the deceased physiologist is from the pen of his compatriot, fellow-student, and life-long friend, Dr. James Moleschott, Professor of Physiology in the University of Rome:—"Science and humanity have sustained a loss which could not be greater. On March 24th expired, at Utrecht, Francis Cornelius Donders, chief among oculists, eminent among physiologists, of our era and of all times. Of him it would be difficult to pronounce whether he was greater and more prolific as an investigator, or clearer and more effective as an expositor, or, lastly, more duteous and helpful as the healer of that organ which is the portal of wisdom and love. When Donders looked genius in the face, it seemed that from him it derived its lustre; when mediocrity confronted him, it felt conscious of that purer light in which it stands self-revealed. Perfectly balanced, full of harmony, benevolent, unwearied, Donders was an artist of life, of that life which death does not extinguish, because it leaves of itself a luminous track on which thousands of men will find light, comfort, well-being, and trust in that power which man develops when his goodness is equal to his wisdom."

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the second Examination of the Board on the 4th inst. in the subjects indicated:—

Anatomy only.—R. J. H. Allen, James B. Byles, and J. C. R. Curtis, students of University College Hospital; G. A. Bowlby, of Trinity Medical College, Toronto; William Bligh, J. R. R. Pollock, and D. Foulkes Roberts, of Guy's Hospital; G. D. E. Jones, of Middlesex Hospital; Charles Hodgson, of St. Thomas's Hospital; Jas. M'Neal and C. S. Simpson, of London Hospital; W. H. Brewer, of Charing-cross Hospital; M. Cutcliffe, of St. Bartholomew's Hospital.

Physiology only.—James Neal and E. F. Page, of Queen's College, Birmingham; G. W. Robertson, of London and Edinburgh Universities; H. Percy Job, of University College Hospital; C. G. F. Morice, of Guy's Hospital; W. E. Baker, of London Hospital; Archibald Graydon, E. P. Isaacs, and H. W. Oborn, of St. Thomas's Hospital; Fielding Clarke, C. W. H. Newington, J. H. Griffiths, and R. C. Gully, of St. Bartholomew's Hospital.

Passed on the 5th inst.:—

Anatomy and Physiology.—A. Paine, W. A. Mallam, J. O. Symes, and R. M. Smyth, students of St. Mary's Hospital; R. R. Smith, of University College; H. J. Jäger, of King's College Hospital; C. S. Wallace, of St. Thomas's Hospital; J. B. Byles and G. Norman, of Westminster Hospital; N. Dowling, of Melbourne University; F. E. Ingall, H. O. Johnson, H. E. Pace, W. H. Williams, of London Hospital; E. E. Bensley, W. F. Colclough, S. G. Floyd, T. B. P. Davies, and F. W. Wilson, of Guy's Hospital.

Anatomy only.—W. H. Cooke, of St. George's Hospital; G. W. Henry, of Bristol School of Medicine.

Physiology only.—A. E. Armstrong, of Westminster Hospital; G. A. T. Fox and W. L. Pethybridge, of St. Bartholomew's Hospital: W. E. E. Powles, of London Hospital; J. S. Tabb, of Charing-cross Hospital.

Passed on the 8th inst.:—

Anatomy and Physiology.—J. C. Baker, B. G. Seton, J. Smale, and A. C. Ta' Bois, students of St. Bartholomew's Hospital; J. J. Browne, E. T. E. Hamilton, and A. T. Rake, of Guy's Hospital; A. S. G. Bell, E. Cullinan, and H. Wolseley-Lewis, of Westminster Hospital; O. P. Turner, of University College; A. Delve, of University College and Mr. Cooke's School of Anatomy and Physiology; T. F. Cockill and G. Hern, of Middlesex Hospital; E. W. James, of King's College; G. W. Cazalet, of London Hospital.

Anatomy only.—E. P. Dukes, H. St. J. Fraser, and P. McK. C. Wilmot, of Guy's Hospital; F. E. Easton and J. H. Hobling, of St. Mary's Hospital; R. W. Brimacombe, of St. Mary's Hospital and Birmingham; T. R. H. C. Hicks and A. R. Walters, of London Hospital; C. B. Prall and P. G. Laver, of St. Thomas's Hospital; J. B. Collins, of St. Bartholomew's Hospital; V. G. Drake-Brockman, of Middlesex Hospital; H. H. Mills, of Westminster Hospital; Richard Evans, of University College, Manchester.

Physiology only.—G. T. Bishop, of Charing-cross Hospital; Ralph H. Crowley, of St. Bartholomew's Hospital.

Passed on the 9th inst.:—

Anatomy and Physiology.—H. Finley, H. M. Richards, W. H. B. Stoddart, and G. A. Watson, students of University College; A. S. Blackwell, H. J. Walton, J. P. Stephen Ward, A. N. Weir, R. M. West, C. E. Wheeler, and N. O. Wilson, of St. Bartholomew's Hospital; W. H. D. P. d'Esterre, J. R. Evans, A. G. Hinks, and F. J. Worth, of St. Mary's Hospital; W. A. Bowring, J. E. Harris, W. Potter, and W. P. Purvis, of St Thomas's Hospital; E. Huntley and A. W. Sheen, of Guy's Hospital; W. Evans, of London Hospital; H. A. Hinge, of St. George's Hospital.

Anatomy only.—T. Shütte, of St. Bartholomew's Hospital; F. W. Gange, of University College; H. S. Wild, of St. George's Hospital; C. W. R. Banham, of London Hospital; F. Knapton, of St. Mary's Hospital; T. D. Manning, of Guy's Hospital; A. A. McKinnon, of King's College; R. F. Chance, of St. Thomas's Hospital; G. C. W. Williams and W. Pell, of St. Thomas's and Mr. Cooke's School of Anatomy and Physiology.

Passed on the 10th inst.:—

Anatomy only.—N. F. Kendal, S. R. Lister, C. F. Wightman, and J. Williamson, students of St. Bartholomew's Hospital; E. Green, of King's College; H. M. Abel, of St. Thomas's Hospital; H. M. Weaver-Bridgman, of St. George's Hospital; V. H. Barr, of Guy's Hospital; W. H. Morgan and G. M. F. Nellen, of Middlesex Hospital; L. C. Brohier, of Ceylon and Mr. Cooke's School of Anatomy and Physiology; R. D. Cox, of St. Mary's Hospital; S. G. Felce, of Cambridge and St. Mary's Hospital; F. J. A. Baldwin, A. D. Davies, and J. P. Jones, of London Hospital.

Physiology only.—C. G. L. Dähne, H. O'N. Fraser-Luckie, W. G. West, J. A. T. White, and C. A. Worth, of St. Bartholomew's Hospital; M. B. Foster and E. Parsons, of Charing-cross Hospital; J. H. Bicket and E. T. P. Eames, of London Hospital; R. E. P. Squibbs, of Middlesex Hospital; H. J. Frederick, of St. Thomas's Hospital; J. V. Pratt, of University College; S. Croneen, of Guy's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examination in surgery, and obtained a medical qualification, was at the quarterly meeting of the Council on the 11th inst. admitted a Member of the College:—

Jones, Francis Frederic, L.S.A., Woodborough House, Bristol.

UNIVERSITY OF EDINBURGH.—The following is the official list of candidates who passed the First Professional Examination in Medicine in March:—

A. T. Anderson, W. C. Anderson, G. J. Bagram, T. B. Barber, W. D. Barrow, J. S. Bateson, Alexander Baxter, George Bell, J. B. Bell, W. B. Bell, C. C. Bird, James Blyth, C. H. Bond, Laurence Bowman, A. S. Boyd, Alexander Bremner, J. C. Brown, W. S. Bruce, W. M. Brunton, A. W. Cameron, James Cameron, P. N. Carmichael, J. G. Cattanach, J. M. Christie (M.A.), G. P. Coldstream, R. A. Corson, James Cowie, George Crarer, J. F. Crombie, V. M. Daly, R. P. Dawson, C. B. Dobell, J. Q. Donald, W. E. Douborg, D. C. Edington, Thomas Fentem, A. A. Fermie, Andrew Fernie, William Fitzgerald, A. W. Forrest, J. R. Foster, G. A. Fothergill, D. P. Foulkes, R. A. Fox, Charles Frier, Antonius Georgian, S. D. Graham, John Grieve, T. C. Guthrie, W. T. Hall, W. M. Halliday, J. A. Hamilton, A. H. Hopkins, E. C. W. Hughes-Games, F. H. Humphris, S. P. Hyam, George Johnstone, L. B. Keng (with distinction), Robert Knox, George Lane, A. W. V. Livesay, H. C. Lloyd, P. V. Locke, A. H. Lowe, G. O. M. Lunt, W. F. Macarthur, Malcolm M'Callum, Alexander Macdonald, James M'Donald, Alexander M'Ewan, F. W. Mackay, William M'Lean, W. G. M'Neil, J. C. Mitchell, A. J. Nevett, George Newman, P. W. Nicol, H. D. Nuttall, L. J. H. Oldmeadow, John Owens, G. W. Park, Charles Parker, William Peart-Thomas, A. W. Peebles, W. H. Pritchard, Albert Reid, Robert Rendall, Alistair Robertson, William Robertson, William N. Robertson, Edward Robinson, L. N. Robinson, R. H. Ross, W. A. Rutherford, J. D. Saner, Raoul Scheult, J. A. Scott, R. W. L. Scott, Alex. Selkirk, St. John Stanwell, R. R. Stitt, A. G. Talbot, J. R. Taylor, Charles Telfer, A. J. A. Theobalds, Cuthbert Thompson, W. K. Walker, John Wallace, Francis Ward, D. C. Watson, Victor Werdmüller, W. J. White, J. C. Wilson, J. M. Wilson, and C. N. Winch.

CONJOINT SCHEME OF THE COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The following have passed their First Professional Examination:—

S. E. M. Butler, R. Crean, G. A. Fleming, H. Flynn, F. G. Greeves, Giulio Hamilton, T. H. Hewitt, J. Hogan, E. L. Hunt, T. G. Magrath, P. P. A. Murray, C. J. Nally, T. F. O'Connor, James O'Donnell, T. A. Poirotte, A. R. Twigg, and G. T. White.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—DENTAL EXAMINATION.—The following gentlemen have been admitted Licentiates in Dental Surgery of the College:

John Charters Birch, Victor Massey Crosse, Henry Williams Messenger, John George Wallis, and Walter Williams.

ILKLEY HOSPITAL AND CONVALESCENT HOME.—The twenty-seventh annual report shows that the number of patients had been larger than in any year during the history of the institution. An honorarium of £50 was presented to Dr. Johnstone as an acknowledgment of his valuable services as medical officer.

THE ROYAL FREE HOSPITAL.—It is proposed to reconstruct the Gray's-inn-road front of the Royal Free Hospital, and so to extend the accommodation for patients.

NEW WATER-SUPPLY.—The new works constructed by the Rickmansworth and Uxbridge Valley Water Company for the supply of the district were opened on Saturday last.

VACCINATION GRANT. — Mr. Webster Adams, Chestnut House, Ipswich, medical officer and public vaccinator, sixth district, Woodbridge Union, has been awarded the Government grant for efficient vaccination.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the Fund, held on the 9th inst., T. Russel Pickthorn, Esq., Inspector-General, in the chair, the sum of £43 was distributed among the several applicants.

GIFT TO WEST DERBY.—The West Derby Local Board, at their meeting on the 4th inst., passed a vote of thanks to Mr. N. S. Glazebrook, M.R.C.S., of that town, for having presented a public fountain for the use of the inhabitants.

ACCIDENT TO A SURGEON.—We regret to state that Mr. W. R. Tytheridge, of The Chestnuts, Epsom, M.R.C.S., L.R.C.P. Edin., met with an accident while hunting with the Surrey staghounds on the 30th ult. He was thrown from his horse, and sustained a fracture of his ribs and other injuries.

UNIVERSITY OF OXFORD. — Notices have been issued that the final examination for the degree of Bachelor of Medicine will commence on Monday, June 10th, at 10 A.M. The examination for the degree of Master in Surgery will take place on Thursday, June 20th. The first examination for the degree of Bachelor of Medicine will commence on Monday, July 1st, at 10 A.M.

THE ROYAL ALEXANDRA HOSPITAL, BRIGHTON.—The annual report—the twentieth—for the past year is satisfactory alike in respect to the additional relief afforded and the financial condition of the institution. There had been an increase of in-patients, but of out-patients the number was in excess of any previous year. The income had amounted to £2128 13*s.* 2*d.*, and the expenditure to £1865 6*s.* 3*d.*

SANITARY INSTITUTE EXHIBITION AND CONGRESS, WORCESTER.—At a meeting of the general committee recently held at the Guildhall, Mr. Ernest Day (the mayor of the city) presiding, it was decided to invite the Sanitary Congress to Worcester in the ensuing autumn, and the mayor undertook to send the invitation accordingly. A large addition was made to the local committee. An executive committee was appointed, and Dr. Strange and Dr. Swete were elected joint honorary secretaries.

A MEDICAL STUDENT DROWNED.—An inquest was held at Littleport, near Ely, on Saturday last, on the body of Mr. Charles Edward Macaulay Morris, a medical student of St. Bartholomew's Hospital, who was drowned by the upsetting of a canoe in the river Ouse. On the evening of the 4th inst. he took a canoe at Cambridge and went to Denver Sluice. The next morning the canoe was found floating down the river at Littleport, and the deceased's body was recovered.

RICHMOND HOSPITAL, SURREY.—The twenty-first annual report has just been issued. The statement of accounts for 1887 showed a balance in the hands of the treasurers of £163 17*s.* 5*d.* The committee had consequently been enabled to invest nearly all the legacies which accrued to them during 1888, and to carry on the work of the hospital on the ordinary income of the year, leaving then a balance in hand of £92 14*s.* 6*d.* There had been 409 in-patients and 2922 out-patients treated.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mrs. Elizabeth H. G. Eden, of 43, Eaton-square, London, has bequeathed by her will £500 to the Royal Hospital for Incurables, £200 to the Beccles Hospital, £100 each to the Earlswood Asylum for Idiots, and the Hospital for the Epileptic and Paralysed.—Mr. William Agnew has given £1000 to endow a cot at the Children's Hospital, Pendlebury. — The Mercers' Company has given fifty guineas to the Convalescent Home Fund of the Chelsea Hospital for Women.—The Clothworkers' Company has granted a donation of twenty guineas to the general funds of the British Home for Incurables (office, 73, Cheapside).—The Bishop of Ripon's Lecture on "Dante," delivered at Grosvenor House, Park-lane, on Saturday last, on behalf of the Paddington-green Children's Hospital, produced about £250. — Mr. Beckett, M.P., has given £1000 to the Doncaster Infirmary, as a gift from himself and other members of the family, in memory of the late Lady Beckett.—Mr. Thomas William Wing, late of 83, Piccadilly, has bequeathed £1000 to the City of London Hospital for Diseases of the Chest, and to the East Suffolk Hospital, Ipswich.—The staff and *employés* of the Signal Engineering Works, Great Western Railway, Reading, have forwarded a donation of fifteen guineas to the Royal Berkshire Hospital.—The collection on Sunday morning last at St. Peter's Church, Cranley Gardens, on behalf of the Consumption Hospital, Brompton, amounted to upwards of £70.

LITERARY INTELLIGENCE.—The editorship of the *Prager Medicinische Wochenschrift*, which is vacated by Professor Kahler on his translation to Vienna, has been taken over by Professor Zanfal.—Dr. M. N. Shmeleff, editor of the Russian *Journal of Hygiene*, having been appointed Vice-Director of the Medical Department of the Government, Dr. M. J. Galanin has been appointed to succeed him as editor.—A new Russian medical journal is about to appear under the title of *Meditsin*. The editor will be Dr. S. M. Vasilieff. It will appear twice a month, except in June, July, and August, when there will only be a single issue.

MEDICAL NOTES IN PARLIAMENT.

Lunacy Acts Amendment Bill.

IN the House of Lords on Friday, the 5th inst., on the motion of the Lord Chancellor, this Bill was read a third time.

Indecent Advertisements Bill.

On Monday, the 8th, the Earl of Meath moved the second reading of a Bill to prevent the circulation of indecent advertisements.—The Lord Chancellor said he thoroughly sympathised with the objects of the Bill, but thought it would require very considerable amendment in Committee.—The Archbishop of Canterbury also supported the Bill, and complained that indecent papers professing to be of a medical character were scattered broadcast, attempts having actually been made to introduce the evil into girls' schools.—The Earl of Kimberley urged that extreme care should be exercised to prevent abuse of the Act if it passed. The Bill was read a second time.

Flogging and the Revolver.

The Earl of Milltown moved that his Bill amending the Larceny Act, 1861, be committed to a Committee of the whole House.—Lord Herschell thought the Bill should be referred to a Standing Committee, and not to a Committee of the whole House.—A discussion followed, in which the Marquis of Salisbury supported the motion.—Lord Esher denounced flogging as a punishment very difficult to administer, and the severity of which depended a great deal, not only upon the constitution of the victim, but of the executioner. If a man had a peculiar mode of flogging, if he brought down the lash, not only upon the back, but round the stomach, the effect might be very serious. It was said that the doctor would be present, but the mischief was often done before the doctor could interfere.—Lord Bramwell thought flogging was a proper punishment to apply in such mischievous cases as were aimed at in this Bill.—Lord Norton remarked that flogging was the only punishment for which a man never came up a second time.—The Earl of Milltown said he had no objection to refer the Bill to one of the Standing Committees, and the Bill was accordingly so referred.

The Smoke Nuisance.

On Thursday, the 11th, on the motion of Lord Stratheden and Campbell, the Smoke Nuisance Abatement (Metropolis) Bill was read a second time, and referred to the Standing Committee on General Bills.

The Vaccination Acts.—A Royal Commission to be appointed.

In the House of Commons on Friday, the 5th inst., Mr. Picton moved a resolution advocating the appointment of a Royal Commission to inquire into the working of the Vaccination Acts. In the course of a long speech he dwelt upon the injurious effects of vaccination and the hardships of the present law on those who conscientiously object to it, and urged that inquiry should be made into the system of compulsory notification, isolation, and quarantine as carried out at Leicester and elsewhere, to which he gave a hearty approval, and that evidence should be taken as to the present state of scientific and medical opinion on the effects of vaccination.—Dr. Farquharson seconded the motion, and, although he had always been in favour of compulsory vaccination, he thought an open and scientific investigation would do much good, and that the benefits of the compulsory system would be conclusively proved.—Mr. Ritchie severely condemned the exaggerated and untrue statements with regard to vaccination which were circulated among the poorer classes, and he emphatically denied Mr. Picton's allegations as to its evil effects. Referring in some detail to the results of the Sheffield epidemic in 1885, he quoted numerous statistics to prove the benefit of vaccination. These showed that the mortality in Sheffield among unvaccinated children was 4400 per 100,000, but only nine in the case of vaccinated children. One of the most important allegations made by the hon. member had reference to the communication of disease in the process of vaccination. The officers of the Local Government Board had not found one case of the kind that could be properly borne out. Again, Dr. Creighton had distinctly stated, in a letter to THE LANCET, that he had never contended or even affirmed that infantile forms of that disease were due to vaccination,

but had contended exactly the opposite. Therefore the burden of evidence was distinctly against the allegation of the hon. member for Leicester. In conclusion, he pointed out that the anti-vaccinationists had raised fears which it was desirable to remove, and for that reason the Government thought it would be advantageous to institute an inquiry, especially as regarded sanitary precautions. They could not, however, accept the terms of the motion, but they intended to appoint a Royal Commission to make an investigation which he had no doubt would be satisfactory to Mr. Picton as well as to those who differed from him.—Sir L. Playfair traced the history of vaccination, and showed that before 1841, when vaccination was first introduced, the rate of deaths was 3000 per 1,000,000; the death-rate now was only 156 per 1,000,000. In Germany, where compulsory vaccination and revaccination exist, the deaths are 4 per 1,000,000, and in Austria, where there is no compulsion, there are 325 deaths per 1,000,000. Although he was a convinced believer in vaccination and compulsion, considering the misrepresentation of the anti-vaccination propaganda he approved the decision of the Government to appoint a Royal Commission.—Sir G. Hunter remarked that he had had extensive experience with reference to this disease in India; and, speaking with some authority, he could say that he regarded an unvaccinated person as a great source of danger to the health of the people. Gentlemen who maintained the views of the hon. member for Leicester were continually quoting certain medical men in support of those views, but just as judges differed oftentimes on a point of law, so it need not be surprising if we found medical men opposed to compulsory vaccination. They were so few, however, that they could be counted almost on the fingers of one hand. He was glad the Government had consented to this inquiry, because it would tend to show how successful vaccination was, and bring to an end the animadversions and puerile allegations so frequently brought against it.—Mr. Picton, on the understanding that the Government intended to appoint a Commission, asked leave to withdraw his motion, which was refused; and, after some remarks from Sir J. Pease, Dr. Cameron, and others, the motion was negatived.

Certifying Surgeons in Factories.

On Monday, the 8th, Mr. Matthews, in reply to Mr. Addison, stated that he had had under consideration the representations recently made by deputations from Lancashire and Yorkshire in favour of the abolition of certifying surgeons in factories, and he hoped to introduce a Bill amending the Factory Acts this session. He would then take the opportunity of stating the decision of the Government on the subject.

Local Government for Scotland.

The Lord-Advocate introduced four Bills, the effect of which will be to confer upon Scotland a measure of local self-government practically similar to that obtaining in England, with the exception, however, that there are to be no aldermen in Scotland. All matters relating to public health will be placed in the hands of the new County Councils, which will have power to appoint the medical officers and sanitary inspectors. The Bills were read a first time amid cheers.

Atmosphere of the House of Commons.

In Committee of Supply on the Civil Service Estimates, on the vote of £42,379 for the Houses of Parliament, Mr. W. A. Macdonald complained that the House of Commons was not ventilated upon a systematic plan, and that the atmosphere became unhealthy in consequence.—Mr. Plunket replied that the system of ventilation throughout the building was founded upon the most approved scientific principles.—Mr. Cooke said he observed the other night that the temperature of the House was 64°, and that arrested his attention, because a doctor had ordered the temperature of a sick room to be maintained at 64°, which therefore could not be a proper temperature for the House of Commons. (Hear, hear.)—Sir W. Foster complained that the air of the House was generally five or six degrees too high. He observed that the complexions became gradually bleached by continuous attendance at the House. Several members also complained of the vitiated air and defective lighting of the House, Mr. J. Fitzgerald remarking that one effect of the present system was that members who constantly attended the debates soon found their heads as bare as a billiard-ball. (Laughter, and "Hear, hear.")—Mr. Labouchere believed the ventilation of the House to be absolutely perfect—(laughter, and "Hear, hear")—and that nothing contributed so much to health and longevity as attendance at the debates.—Dr. Fitzgerald declined to believe that the carbonic acid generated in the House could be conveyed through the points in the ceiling.—The vote was finally agreed to by 192 to 73.

Horseflesh (Sale for Food) Bill.

This Bill, as amended, was considered, and, upon the motion of Mr. Knowles, who was in charge of the Bill, clauses were added extending its operation to Scotland and Ireland. The Bill was then read a third time.—This Bill was subsequently read a first time in the Upper House.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BRYAN, C. F., M.R.C.S., L.S.A., has been appointed Certifying Factory Surgeon for Leicester, vice C. R. Crossley, M.R.C.S., L.S.A., resigned.

DE SEILAN, C. L. J., M.D., M.B. & C.M. Aberd., has been appointed Medical Officer to Etwall District, Burton-on-Trent Union.

GARLAND, E. C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health to the Borough of Yeovil.

GLINN, C. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Hatherleigh District, Okehampton Union, vice Parsloe, resigned.

GOODFELLOW, THOMAS A., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Salford Royal Hospital.

METCALFE, G. HERBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Resident Medical Officer to the North west London Hospital, Kentish Town-road.

SELLS, H. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Northfleet District, vice Dr. Crook, resigned.

STEVENSON, W. D., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator to No. 3 District of the New Winchester Union.

TODD, A. H. S., B.A., M.B., B.Ch. Dub., has been reappointed House Surgeon to the Monkstown Hospital, Ireland.

WALKER, J. BURNLEY, M.D., has been appointed Medical Officer of Health for the Golcar Combined District, Colne Valley, vice James MacLintock, M.D., B.Sc., appointed Medical Officer of Health for Bradford.

WARNER, FREDERICK ASHTON, F.R.C.S., has been appointed Registrar and Anæsthetist to the National Orthopædic Hospital, vice H. Hoole, M.D. Lond., resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF BLACKBURN.—Medical Officer of Health, and Surgeon to the Police Force and Fire Brigades. Salary £500 per annum net. The Corporation provides drugs, appliances, &c.

BRISTOL GENERAL HOSPITAL.—Surgeon.

CHELTENHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £40 per annum, with board and apartments.

CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Manchester.—House Surgeon. Salary £80 per annum, with apartments and board.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician. Salary £50 per annum, with board and lodging in the hospital.

LAMPETER UNION, Lampeter.—Medical Officer, Medical Officer of Health, and Public Vaccinator. Salaries will be £30 as Medical Officer and £10 as Medical Officer of Health. The vaccination and extra medical fees amounted last year to £78 19s.

MONTROSE ROYAL LUNATIC ASYLUM.—Junior Assistant Medical Officer. Salary £100 a year, with board and lodging.

PARISH OF GREAT YARMOUTH.—Medical. North District. Salary £80 per annum, with the extra medical fees for surgical operations, &c.

ROYAL ISLE OF WIGHT INFIRMARY, Ryde.—House Surgeon and Secretary. Salary £50 per annum, with board, lodging, &c.

S. M. D., THE LANCET Office, 423, Strand, W.C.—Assistant Medical Officer in a Metropolitan Private Asylum. Salary £100 per annum.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—Salary, with board, first year, 100 guineas; second year, £200.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torbay.—Junior House Surgeon and Dispenser.

Births, Marriages, and Deaths.

BIRTHS.

BATTEN.—On the 3rd inst., at Walton House, Lordship-lane, S.E., the wife of George B. Batten, M.D., C.M., of a daughter.

DUTCH.—On the 19th ult., at Bristol Place, Crewe, Cheshire, the wife of Dr. M. Dutch, of a son.

LIMONT.—On the 4th inst., at 3, Eldon-square, Newcastle-on-Tyne, the wife of James Limont, M.A., B.Sc., M.B., M.R.C.P., of a daughter.

MCKENZIE.—On the 12th ult., at Berea, Durban, Natal, the wife of Dr. Archibald McKenzie, of a daughter.

RAYNER.—On the 7th inst., at Tiviot Dale, Stockport, the wife of Edwin Rayner, M.D., F.R.C.S., of a daughter.

MARRIAGES.

THOMAS—SCATLIFF.—On the 4th inst., at Clapham, S.W., J. Telfer Thomas, L.R.C.P., M.R.C.S., son of Captain Thomas, of Tregenna, Camborne, to Florence Gertrude, youngest daughter of the late John Parr Scatliff, M.D., of Sloane-street and Clapham-common.

POLLOCK—STEWART.—On the 27th Feb., at Bathurst, New South Wales W. Rivers Pollock, M.B. Cantab., fourth son of Geo. F. Pollock, Esq., of Hanworth, Middlesex, to Annie Athol, eldest daughter of James H. Stewart, Esq., of The Mount, Bathurst.

DEATHS.

COURTNEY.—On the 2nd inst., at Coalbrookdale House, Clifton Park, Birkenhead, George Thomas Courtney, L.R.C.P., L.R.C.S. Edin.

DOUGLAS.—On the 8th inst., at Canmore-street, Dunfermline, Henry Douglas, M.D., L.R.C.S. Edin., aged 80.

ELLIS.—On the 31st ult., on board the P. and O. s.s. *Oriental*, on her homeward voyage, two days out from Bombay, John Ellis, M.A., M.D., Bengal Medical Service, aged 54.

FRASER.—On the 3rd inst., at Ayr, Deputy Surgeon-General James Fraser, M.D., late 50th Queen's Own Regiment.

ROGERS.—On the 3rd inst., at Hampstead, Joseph Rogers, M.D., aged 68.

WATTS.—On the 10th inst., at Cambridge House, Fortess-road, N.W. the infant son of Dr. and Mrs. F. Watts, aged ten days.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 11th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apl. 5	29·44	S.W.	43	42	79	52	41	·05	Overcast
,, 6	29·53	E.	46	44	76	53	41	..	Hazy
,, 7	29·40	E.	48	45	96	55	40	..	Cloudy
,, 8	29·37	E.	47	45	81	57	43	·04	Overcast
,, 9	29·35	E.	45	44	58	49	44	·05	Raining
,, 10	29·50	E.	43	42	..	46	41	·23	Raining
,, 11	29·50	E.	40	40	70	48	39	·33	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of* THE LANCET *to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

"OUR LADY OF FEVER."

THE cult of this goddess dates from the first century of the history of Rome. At the time of Varro (*obiit*, B.C. 28) there were three temples of fever still standing—one on the Palatine, one on the Piazza of Marius on the Esquiline, and one on the upper end of the Vicus Longus, a street corresponding in part of its length to the Via Nazionale. On the Esquiline there was an altar dedicated to Mala Fortuna (the Evil Eye) and an altar in a grove at which the goddess Mephitis was worshipped. The archæologist Lanciani lately discovered near the Prætorian camp an altar dedicated to Verminus, whom he calls the "god of microbes," and in the centre of the Roman Forum the same authority mentions an altar to Cloacina, "a goddess of typhoid." Mediæval Rome also raised a chapel to the Madonna della Febbra—Our Lady of Fever.

Mr. Horrocks (Bradford).—The matter had perhaps better be left where it is.

A very Light Sleeper is thanked; the procedure is well known.

"ERRORS IN THE MEDICAL REGISTER."

To the Editors of THE LANCET.

SIRS,—In a letter in your issue of April 6th, "M.B., C.M." complains that after registering two additional qualifications these did not appear for eighteen months in the Register, and supposes that he ran great risk because he "had signed all kinds of certificates, using his later qualifications only." Your correspondent labours, like a great many young practitioners, under a misapprehension with regard to the Medical Act. He had certainly just cause of complaint that he did not for a period of eighteen months get what he paid for; but let me assure him that this neglect on the part of the Council did not make the least difference to him whatever, and that he ran no risk. But he is quite right in one thing—namely, that the registration of extra diplomas and degrees, beyond those qualifying to practise in all three branches, is both unnecessary and a waste of money to those who cannot afford it, and quite superfluous to those who can. The object of registration is to enable one to recover fees in courts of law and to legally hold appointments. "M.B., C.M." may practise and sign certificates and yet not be registered, provided he does not certify that he is a "practitioner duly registered." He is perfectly at liberty to sign himself "M.R.C.P.," or any other diploma or degree he chooses which he may possess, though these may not be registered, but he may not certify these to be "registered qualifications" when they are not so. No qualified practitioner is bound to register. If he is not registered, he is amenable only to the college from which he obtained his diploma.

I am, Sirs, yours truly,

April 6th, 1889. M.D., M.R.C.P., &c.

ADULTERATION IN ST. PETERSBURG.

IT is generally supposed to be an advantage to be able to obtain farm produce, or what ought to be farm produce, direct from the country, where it is not so likely to be sophisticated as that which is purchased in a large town. That the security afforded by food being sent direct from the country may be fallacious is shown by the report recently issued of work done in the two public analytical laboratories opened by the St. Petersburg municipal authorities. Out of twenty-three samples of butter analysed only eleven were pure butter, twelve containing from 77 to 83 per cent. margarine and fat; while one, which was sent from a village in the neighbourhood to a family which had for many years been in the habit of getting its butter thence contained no less than 95·8 per cent. of fat. The work done by these newly established institutions is considerable; but there is so much that has had to be left undone that the municipal authorities have just sanctioned an additional expenditure, bringing the total to £300, instead of the amount hitherto allowed—viz., £120. In the report alluded to it is stated that the number of analyses of milk and cream was forty-seven, in most of which there had been an addition of water; while one sample of cream consisted almost entirely of a mucilaginous emulsion containing bacon fat, but scarcely any milk.

X. Y. Z.—1. The absorption of belladonna in any quantity necessarily involves dilatation of the pupil. In the case mentioned the possibility of direct local action might be considered.—2. The action of belladonna and hyoscyamus upon the pupil can only be combated by their physiological antagonists.

Mr. Brocklehurst.—Our correspondent might apply to the author, at Birkenhead.

Miss Simpson is referred to our advertising columns.

THE TOXIC EFFECTS OF WORMWOOD.

To the Editors of THE LANCET.

SIRS,—The following case may be of interest to those who live in a neighbourhood where this plant abounds, and where its virtues as "an herb of Mars" are still venerated, and sometimes utilised to the detriment of the recipient.

Recently I was consulted by a gentleman who complained of vertigo, "weakness and trembling" in his limbs,—so much so that he had to discontinue his writing—of "a dragging pain" over the lower part of the abdomen, of a constant desire to micturate, and of a burning sensation at the tip of the penis. He volunteered the statement that at about 8.30 A.M., after breakfasting, he took a quarter of a pint of a home-made infusion of wormwood. The above symptoms came on about an hour afterwards, and increased in intensity for about forty minutes, after which they gradually subsided. When I saw him at 10.30 A.M. the toxic effects were evidently passing off; so, save a little stimulant, if necessary, I considered treatment useless. Except for a slight feeling of weakness in the limbs, which lasted all day, by 2 P.M. he had entirely recovered.

One reads that the various kinds of wormwood were very extensively used by our forefathers, and to this day the plant is much in vogue by the public as a cure for the divers ailments to which man is heir; but of its poisonous properties I can find no record, though on the Continent the chronic condition known as absinthism, from long-continued abuse of the fascinating liqueur, is well recognised. It is difficult to determine the strength of the infusion taken in this case, so as to form an opinion whether a poisonous dose was in reality absorbed, or whether it was a peculiar susceptibility on the part of the gentleman in question. I forward this case, thinking the facts may be of interest, and perhaps of service, to some of your numerous readers.

I am, Sirs, yours faithfully,

Oakmoor, April 9th, 1889. BERNARD ROBINSON.

M.D.—Granting that the facts of the case are given fully and accurately, we should say that the treatment of the patient was decidedly wanting in judgment, if not in humanity.

Dr. Dearden.—The paper is marked for early insertion.

METATARSALGIA.

To the Editors of THE LANCET.

SIRS,—In following my particular branch of the profession (dental surgery), I operate for many hours during the day in a standing position. I fancy I can hear a chorus of voices exclaiming, "Why don't you use a stool, and work whilst sitting?" Be that as it may, I prefer standing; and, with your permission, I will state my experience. Well, I first noticed some six or seven years ago that I became more tired in my feet than could be reasonably accounted for by my hours of work, and, further, I felt pain in the plantar arch. I noticed, too, that I became more comfortable when wearing new boots, and I therefore came to the conclusion that the pain and tiredness were due to descent of the tarsal arch. I had some boots made with flexura waists; and, of course, special lasts were made, and the measurements taken whilst standing. I would advise anyone who has to stand many hours during the day to adopt some such supports, as I am sure my condition has been much benefited by them. I am, Sirs, yours faithfully,

April 8th, 1889. M.R.C.S., L.D.S.

THE G.W.R. MEDICAL SOCIETY.

THE *North Wiltshire Herald* contains a report of various matters affecting the remuneration of the medical officer. Incidentally the sufficiency of the apothecaries' licence as a qualification was questioned, we think neither justly nor generously. The licence is now a full and legal one in all branches of the profession, and one in which any man may properly "dare to start practice."

Mr. G. E. Perry.—The publication of the letter had better be postponed until after the receipt of the reply from the General Medical Council.

W. W. H.—The suggestion is by no means novel. Bottles varying in shape and colour have for a long time been used by dispensers.

Mr. Lawson Tait.—The point in dispute is, we think, of hardly sufficient importance to warrant more space being given to it.

G. P. can claim £1 1*s.* and travelling expenses, if any. As a rule, £2 2*s.* is paid.

THE OSWESTRY COTTAGE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—The committee of the Oswestry Cottage Hospital met on Feb. 2nd last, among other business to elect a surgeon in place of Dr. Fuller, resigned. There were three applications—viz., from Mr. Williams, myself, and Mr. Blaikie, who applied for his son, who was not then residing in the town, but acting as an assistant in Gloucestershire. Mr. Blaikie was elected, I believe, unanimously. About two years ago I was appointed medical officer to the dispensary in this town, and at that time Rule 18 of the Cottage Hospital stood thus: "The medical staff of the Oswestry Dispensary are requested to act as the medical attendants of the Cottage Hospital, and to make such arrangements for visiting in-patients as may seem best to them." About six weeks after my election to the dispensary, Dr. Fuller asked me to assist him with a case he had at the hospital, saying that I had a right to attend there by virtue of the above rule. I did so, and after having gone there a few times I received a note from the secretary, in which he requested me to discontinue my visits to the hospital. This note, from the wording of it, it is plain, was written upon his own authority. At the annual meeting held in the beginning of last year the above rule was struck out, and the following inserted in its stead: "The medical staff of the hospital shall consist of four fully qualified surgeons residing in Oswestry," &c. Mr. Williams and myself have practised here for over four years, and Mr. Blaikie, jun., who was elected, was not even in the town when appointed. I should like to ask through THE LANCET whether it is customary, or whether such a thing is ever done, in filling up appointments such as the one to which I am referring, to pass over two men who have been several years in a place in favour of one who has never practised in that locality? Also, I should like to ask if the appointment by right ought not to have fallen to me by virtue of the rule to which I have directed your attention? I have enclosed you a copy of the rules of the hospital as they stood when I was elected to the dispensary, also a copy as they stand now, and have marked the rules bearing upon this subject. Also I have enclosed a report of the dispensary bearing my name, to show you that I am surgeon to that institution.

I am, Sirs, yours faithfully,

Oswestry. JAS. T. NEECH.

*** It is difficult for us on a one-sided statement to judge of such questions as those raised by Mr. Neech. It is not unprecedented to appoint a man in his absence. But our correspondent's statements seem so reasonable that we give them publicity.—ED. L.

M.R.C.S., L.R.C.P., and others.—The sulphur lozenges could doubtless be obtained at any first-class druggist's in London.

Bacillus.—If the agreement be clear, it can only be terminated before the end of the first year by mutual consent.

Mr. G. E. Walker (Liverpool).—We shall be happy to give the paper, when sent, due consideration.

AMBULANCE DEPARTMENT VOLUNTEER MEDICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me through your columns to draw the attention of Volunteer medical officers to the class which will be commenced at 26, King William-street, W.C., on Thursday, May 2nd, at 4 P.M., with the object of affording the necessary instruction for obtaining the War Office Proficiency Certificate? The course of six lectures will be given by W. Collingridge, M.D., D.P.H.Camb., Surgeon, Volunteer Medical Staff Corps. Volunteer medical officers desirous of undertaking duty at the forthcoming Easter manœuvres are requested to be good enough to forward their names to me at once.

I am, Sirs, yours faithfully,

ALFRED LINGARD, Hon. Sec.,
King William-st., W C., April 4th, 1889. Surgeon, V.M.S.

Lex.—In the absence of any agreement to the contrary, written or verbal, we think our correspondent is entitled to the notice of which he speaks.

D. E. F.—Dr. D——'s course clearly was to have communicated with the medical man in attendance.

Question.—Murchison.

DOUBTFUL PROVIDENT ARRANGEMENTS.

To the Editors of THE LANCET.

SIRS,—I enclose you a circular which has come into my hands, and which, I think, shows that the state of affairs at Newport is no better, or at any rate not much, than your correspondent, "Via Dolorosa," appears to find at Manchester. From this circular you will see that for the magnificent sum of 1½*d.* a week anyone can obtain attendance (at his own home) and medicine, and that for 4*d.* a man, his wife, and all their children under sixteen years of age can obtain ditto. This highly satisfactory limited association is "run" by two aldermen, one councillor of the borough of Newport, I suppose, and two other individuals, all doubtless proud of their endeavours to benefit mankind. Now is it not lamentable that the profession should be brought to such a state of utter degradation that men can be found to accept such conditions (one of the attractions is a "choice of doctors from a duly qualified staff")? Can you or your readers tell me of anyone who does anything for anybody for three halfpence a week? Ours used to be called the profession of a gentleman, but can its most ardent admirer call it so now? Cannot something be done to remedy such a state of affairs? Doubtless one great cause for all this is that the supply of medical men is greater than the demand; but, if the matter were taken up, I cannot help thinking that something might be done to save us sinking below the level of all the trades I know of.

I am, Sirs, your obedient servant,

Monmouth, April 3rd, 1889. J. GRANT WILSON.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following are the written questions submitted to the candidates at the recent respective examinations of the above Board:—

THIRD OR FINAL EXAMINATION.

Principles and Practice of Medicine.

Candidates must answer at least four of the six questions. Candidates unable to answer four questions must report the fact to the Presiding Examiner. The candidate should confine his answers to the points asked in each question, and deal with them in the order indicated.

1. What are the physical signs of aneurysm of the ascending portion of the aorta? Describe the symptoms attributable to pressure of the enlarging tumour upon neighbouring parts. 2. You are called to a case of acute lobar pneumonia following exposure and in an early stage. What circumstances would influence you in your prognosis of such a case, and how would they guide your treatment? 3. What symptoms would manifest to your judgment that a patient is suffering from typhlitis with perityphlitis, and what treatment would you recommend in the face of such symptoms? State also what are the morbid changes found on post-mortem examination in such cases. 4. Describe the rashes which appear in the following diseases according to the appearance, the local distribution, and the course as to time of each in order:—Typhus, enteric or typhoid fever, small-pox, chicken-pox, measles, and scarlet fever. 5. Enumerate the forms of paralysis in which rapid and considerable atrophy of muscles occurs. State the principal changes which the electrical reactions undergo, and the precise electrical treatment you would adopt in such cases. 6. State what you know concerning the symptoms, the diagnosis, and the pathology of Addison's disease.

Midwifery and Diseases of Women.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the Presiding Examiner, and are not allowed to proceed with their examination.

1. Describe the naked-eye anatomy of the gravid uterus at the beginning of the third month, with its contents. 2. Describe the various methods of estimating the conjugate diameter of the female pelvis, stating the circumstances under which each is applicable. 3. Describe the operation of bipolar version, the child presenting in the first vertex position. Enumerate the circumstances under which it is indicated. 4. Give the treatment of a case of eclampsia occurring at the termination of four months' utero-gestation. 5. Enumerate the pathological conditions which may lead to enlargement of the cervix uteri, and give their differential diagnosis. 6. Enumerate the causes of retention of urine in women. Explain the mode of action of each cause.

Examination on Surgical Anatomy and the Principles and Practice of Surgery.

Candidates must answer at least four (including one of the first two) of the six questions, and are strongly advised to answer all six questions. Candidates unable to answer four questions must report the fact to the Presiding Examiner, and are not allowed to proceed with their examination.

1. Describe the operation you would perform for excision of the elbow-joint for disease. Mention the structures the division of which should be avoided. Enumerate in order the parts which must be divided. 2. Describe the course and relations of the internal pudic artery. In the event of its being wounded by an accident, or in an operation, what measures would you adopt? 3. Define the terms myopia, presbyopia, astigmatism, and hypermetropia. Describe the ocular conditions on which these visual defects depend, and state the appropriate means by which they may be remedied. 4. Give the diagnosis of varicocele. Enumerate its causes, and state the treatment you would adopt in this disorder. 5. Describe the symptoms of a simple oblique fracture of the femur, in an adult, at the junction of the lower and the middle third. Mention the varieties of displacement which may occur in this injury, and state their causes. How would you treat such a case? 6. Under what circumstances may a blow on the male perineum be followed by extravasation of urine at an early and at a remote period? How would you guard against such an occurrence?

Medical Diary for the ensuing Week.

Monday, April 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour

MEDICAL SOCIETY OF LONDON.—8.30 P.M. The following Clinical Cases will be shown:—Dr. C. Theodore Williams: (1) An Anomalous Case of Aortic Aneurysm; (2) Contraction of Double Cavities in a case of Advanced Phthisis.—Dr. Beevor: (1) Unusual Eruption in a Patient taking Bromides; (2) Case of Pseudo-hypertrophic Paralysis in an Adult.—Mr. Haslam: Case of Epithelioma of Face after Operation.—Mr. John Holm: (1) Case of Lateral Curvature of the Spine; (2) Case of Inequality in Length of Arms. Cases from Dr. West and others.

Tuesday, April 16.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Specimens:—Dr. Targett: Diffuse Calcification of Liver.—Mr. Sutton: Specimen of Sporadic Cretinism.—Mr. Bowlby: (1) Organs and Parasites from a case of Bilharzia; (2) Rectal Papilloma from same case.—Mr. Shattock: Histology of Eburnated Bones in Osteo-arthritis.—Dr. Goodhart: (1) A case of Cancer of Stomach; (2) A case of Cirrhosis of Liver.—Dr. Robinson: Cysticercus Cellulosæ from Human Muscle.—Mr. Doran: Sequel to case of Primary Cancer of Fallopian Tube reported in 39th vol. of Pathological Transactions.—Mr. Croke: Unilateral Interstitial Nephritis caused by Pressure upon Ureter and Hilus. Card Specimens by Dr. Robinson, Dr. Fenwick, Dr. Ormerod, Dr. Hebb, and Mr. Turner.

Wednesday, April 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.

ROYAL METEOROLOGICAL SOCIETY (25, Great George-street, Westminster).—7 P.M. Mr. Robert Lawson: On the Deaths caused by Lightning in England and Wales from 1852 to 1880.—Mr. F. C. Bayard: The Diurnal Range of the Barometer in Great Britain and Ireland.—Mr. A. W. Clayden: Note on a Working Model of the Gulf Stream.

Thursday, April 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, April 19.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 20.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir H. W. Acland, Oxford; Dr. Isambard Owen, London; Dr. Oscar Jennings, Paris; Prof. Walley, Edinburgh; Mr. H. K. Lewis; Dr. T. D. Savill; Dr. D. G. Evans, London; Dr. Allwright, Brighton; Dr. Currier, New York; Dr. W. Ogle, Derby; Dr. Fleming, Glasgow; Messrs. Garland and Co., London; Mr. D. Biddle, Kingston; Messrs. Burroughs and Wellcome, London; Sir T. Longmore, Woolstone; Mr. Clark Bell, New York; Mr. W. A. Lane, London; Dr. Cheadle, London; Mr. Barker Smith, Dulwich; Mr. Lingard, London; Mr. J. I. Bowes; Mr. Lawson Tait, Birmingham; Dr. Auld, Glasgow; Messrs. Wood and Co., New York; Dr. C. J. Lewis, Stirling; Mr. Kason, Lytham; Mr. Horrocks, Bradford; Mr. W. H. Denham, London; Dr. C. J. White, Bournemouth; Dr. Gould, Chicago; Mr. R. H. Firth, Jullunder; Dr. Dupré, London; Mr. T. W. Thompson; Mr. Brooks, London; Mr. Griffiths, Clifton; Dr. H. Campbell, London; Mr. C. Feyer, London; Dr. J. W. White, Uddingston; Dr. T. F. Pearse, London; Dr. Howden, Montrose; Mr. Turner, India; Mr. Twyford, Hanley; Mr. Packe, Torquay; Mr. Blandford, Stockton; Dr. Thomas, Glasgow; Messrs. Macfarlan and Co., London; Mr. Skrimshire, Mons.; Messrs. Miggerson and Co., London; Mr. Lloyd, Lampeter; Dr. Pope, Leicester; Mr. James Pietersen, Finchley; Mr. A. W. Sinclair, London; Mr. W. A. Ellis, London; Dr. Johnson, Sheffield; Mr. C. J. Jeaffreson, Newcastle-on-Tyne; Mr. Dearden, Church; Mr. Doran, London; Mr. J. Poland, London; Mr. B. Robinson, Oakmoor; Dr. Bode, Nauheim; Mr. J. Roche, Kingston; Dr. Lewenberg, Paris; M. Masson, Paris; Mr. F. Marsh, Birmingham; Mr. Teague, Manchester; Dr. Macgregor, Aberdeen; A Traveller, Cannes; T. W., London; Royal Infirmary, Windsor; W. W. H.; M.D., M.R.C.P.; M.R.C.S., L.D.S.; Bacillus; University of Glasgow; M.B., C.M.; Medicus, Sheffield; Nemo; D. E. F.; A very Light Sleeper; Veritas; Bristol General Hospital; Lex; Bradford Infirmary; Royal Infirmary, Isle of Wight; Enquirer; Cheltenham Hospital; Question; A Dublin Constant Subscriber; Constant Reader.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Vokes, Birmingham; Dr. Crickton, Twickenham; Messrs. Mottershead and Co., Manchester; Mr. Bartlett, Dorchester; Mr. Moses; Messrs. Evans and Co., Liverpool; Mr. Birchall, Liverpool; Messrs. Wright and Co., Bristol; Mr. Williams, Dublin; Mr. Brice, Berks; Messrs. Maw and Co., London; Mr. Rutherford, Dumfries; Messrs. Kingsbury and Co., London; Mr. Bigg, London; Mr. Wood, London; Mr. Blake, Great Yarmouth; Mr. Robson, Newcastle; Mr. Kelvin; Mr. Smyth, East Hartlepool; Mr. Grant, Edinburgh; Mr. Burgess, Essex; Mr. Price, Pembroke; Mr. Stenhouse, Glasgow; Mr. Bruderer, Manchester; Mr. Limont, Newcastle; Mr. Barnard, Buxton; Mr. Heywood, Manchester; Dr. Parry, Glamorgan; Mr. Eschwege, London; Mr. Banks, Hastings; Mrs. Hitch, St. Leonards; Dr. Munro, Dunoon; Mr. Dyer, Liverpool; Mr. Popham, Dulwich; T. S., London; C. J., London; M.B. (30), London; Alpha, Newcastle; Medicus, Manchester; A. B., Gateshead; Portland, London; Medicus, London; Bristol Royal Infirmary; Medicus, Birmingham; Sigma, London; Nelson; Torbay Hospital; Pharmacist, London; Mr. J., Yorks; A. T., London; Lady Superintendent, Northampton; Mentone, London; Kappa; Parish Nurse, London; E. P., Cheshire; H. & R. London; Nurse, Dronfield; E. H. S., London; Primrose, London; T. F., London; Village, London; Zeta, London; Physician, Strand; Memo, Yorks; Hackney Furnishing Co.; A. A. A., London; Suburb, London; S. L., London; Beta, London; Delta, London; Medicus, Croydon; F. M. G., Kilburn; F. S. L., Leeds; P., York.

Lincolnshire Chronicle, Surrey Advertiser, Sussex Daily News, Reading Mercury, Echo, Herald and Weekly Free Press, Evening News (Sydney), Tenbury Wells Advertiser, Hertfordshire Mercury, Printing Times, The Domestic, &c., have been received.

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